

Figure 57a – Leu 63→C β chain

atgaacgctggtgtcactcagacccccaaaattccagggtcctgaagacaggacaga
 gcatgacactgcagtggtgccaggatatgaaccatgaatacatgtcctggtatcg
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 actgaccaaggagaagtccccaatggctacaatgtctccagatcaaccacagagg
 atttcccgtcaggctgctgtcggctgctccctcccagacatctgtgtacttctg
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 tgtttgagccatcagaagcagagatctcccacacccaaaaggccacactggtgtg
 cctggccacaggcttctaccccgaccacgtggagctgagctggtgggtgaatggg
 aaggaggtgcacagtggtgggtcagcacagacccgcagcccctcaaggagcagcccg
 ccctcaatgactccagatacgctctgagcagccgcctgagggtctcggccacctt
 ctggcaggacccccgcaaccacttccgctgtcaagtccagttctacgggctctcg
 gagaatgacgagtggacccaggatagggccaaacccgtcaccagatcgtcagcg
 ccgaggcctggggtagagcagactaa

Figure 57b Leu 63→C β chain

M
 N₁AGVTQTPKF QVLKTGQSMT LQCAQDMNHE YMSWYRQDPG MGLRLIHYSV
 GAGITDQGEV PNGYNVSRST TEDFPLRLLS AAPQSOTSVYF CASRPGLAGG
 RPEQYFGPGT RLTVTEDLKN VFPPEVAVFE PSEAEISHTQ KATLVCLATG
 FYPDHVELSW WVNGKEVHSG VSTDPOPCKE QPALNDSRYA LSSRLRVSAT
 FWQDPRNHFR CQVQFYGLSE NDEWTQDRAK PVTQIVSAEA WGRAD*

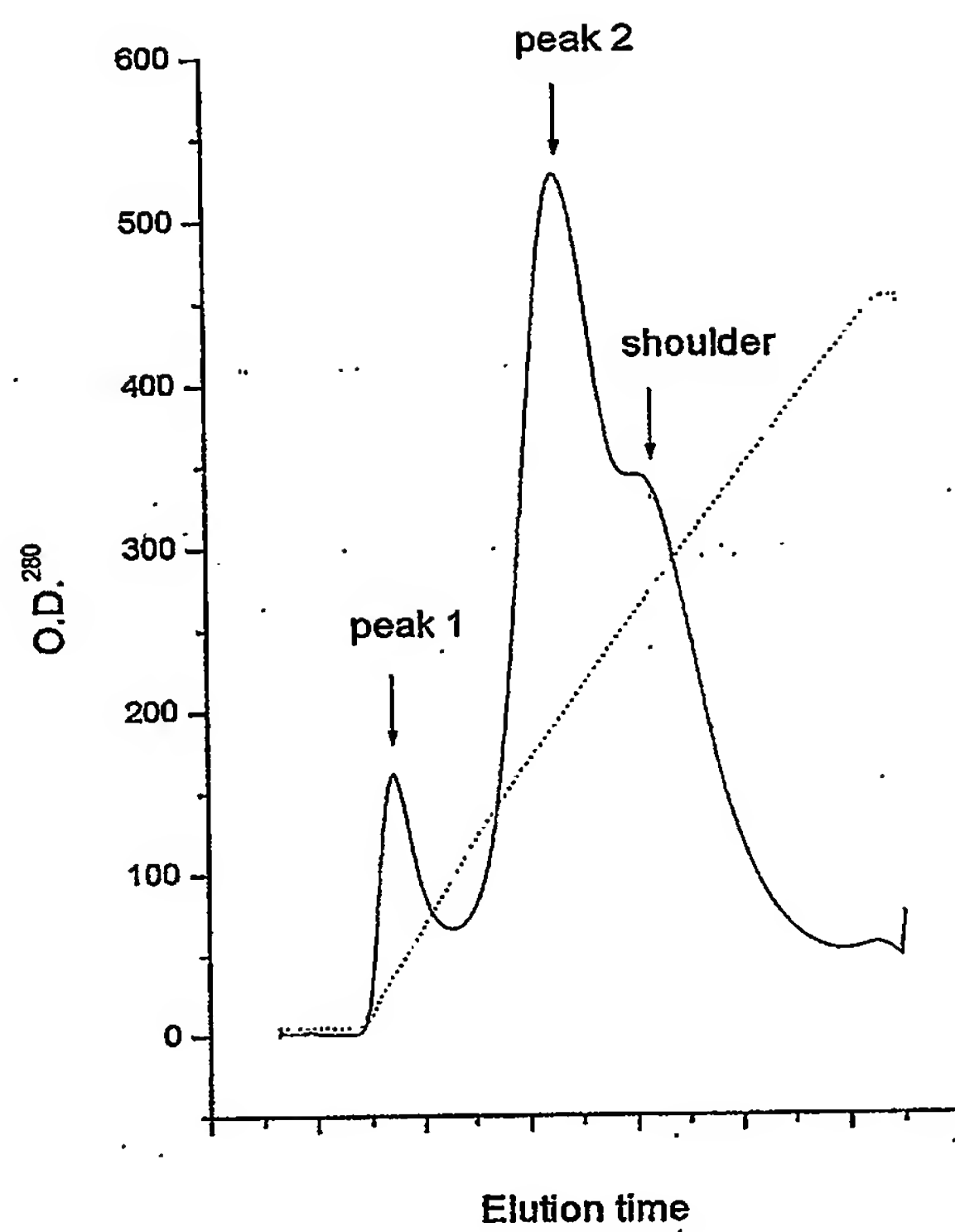
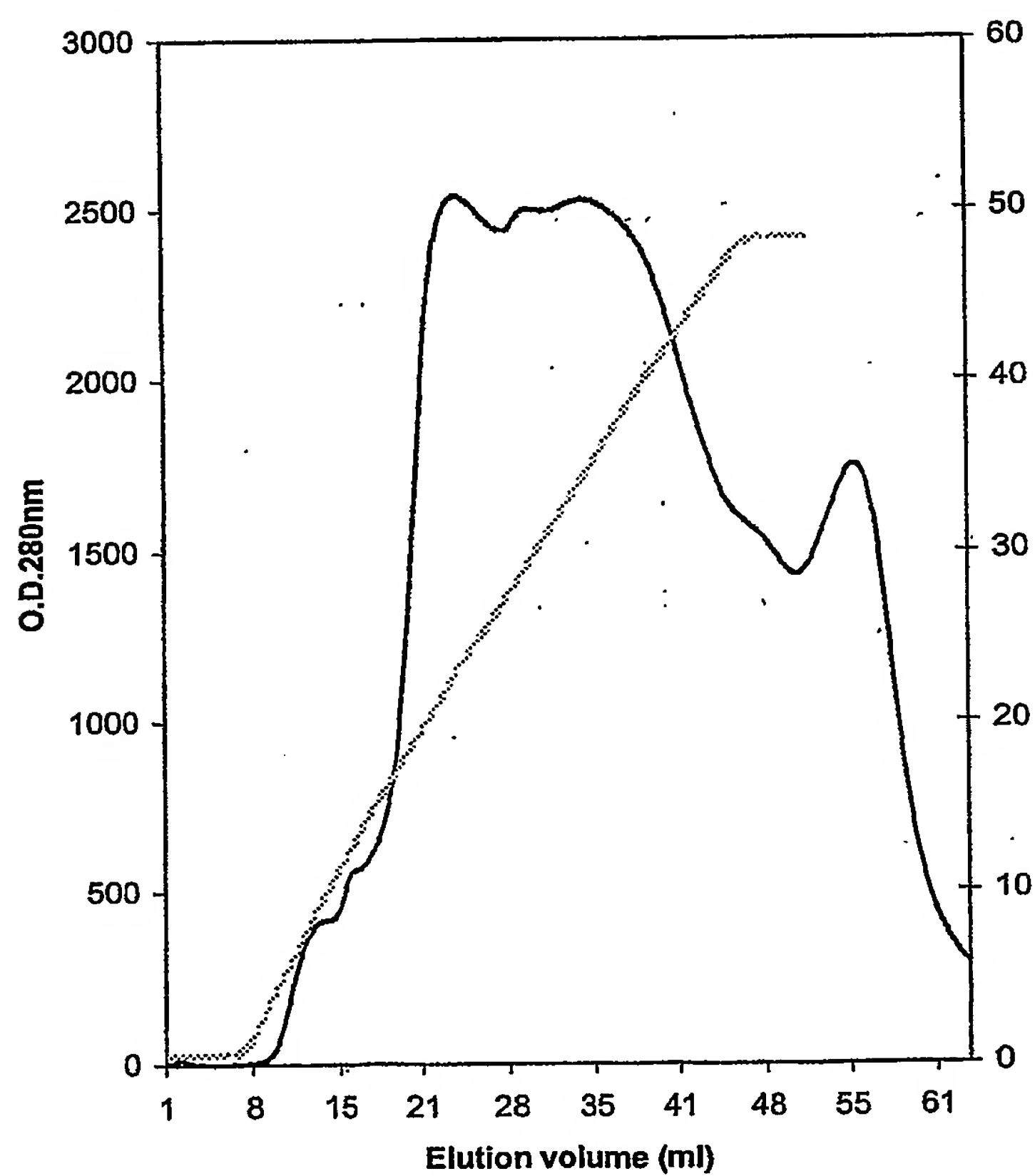
Figure 58a – Glu 15→C β chain

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 acaagacccaggcatggggctgaggctgattcattactcagttggtgctggtatc
 actgaccaaggagaagtccccaatggctacaatgtctccagatcaaccacagagg
 atttcccgtcaggctgctgtcggctgctccctcccagacatctgtgtacttctg
 tgccagcaggccgggactagcgggagggcgaccagagcagtagtctcgggcccgggc
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 cctggccacaggcttctaccccgaccacgtggagctgagctggtgggtgaatggg
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 ccctcaatgactccagatacgctctgagcagccgcctgagggtctcggccacctt
 ctggcaggacccccgcaaccacttccgctgtcaagtccagttctacgggctctcg
 gagaatgacgagtggacccaggatagggccaaacccgtcaccagatcgtcagcg
 ccgaggcctggggtagagcagactaa

Figure 58b Glu 15→C β chain

M
 N₁AGVTQTPKF QVLKTGQSMT LQCAQDMNHE YMSWYRQDPG MGLRLIHYSV
 GAGITDQGEV PNGYNVSRST TEDFPLRLLS AAPQSOTSVYF CASRPGLAGG
 RPEQYFGPGT RLTVTEDLKN VFPPEVAVFC PSEAEISHTQ KATLVCLATG
 FYPDHVELSW WVNGKEVHSG VSTDPOPLKE QPALNDSRYA LSSRLRVSAT
 FWQDPRNHFR CQVQFYGLSE NDEWTQDRAK PVTQIVSAEA WGRAD*

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**Figure 59: AE column Thr48/Ser57****Figure 60: AE column Thr45/Ser77**

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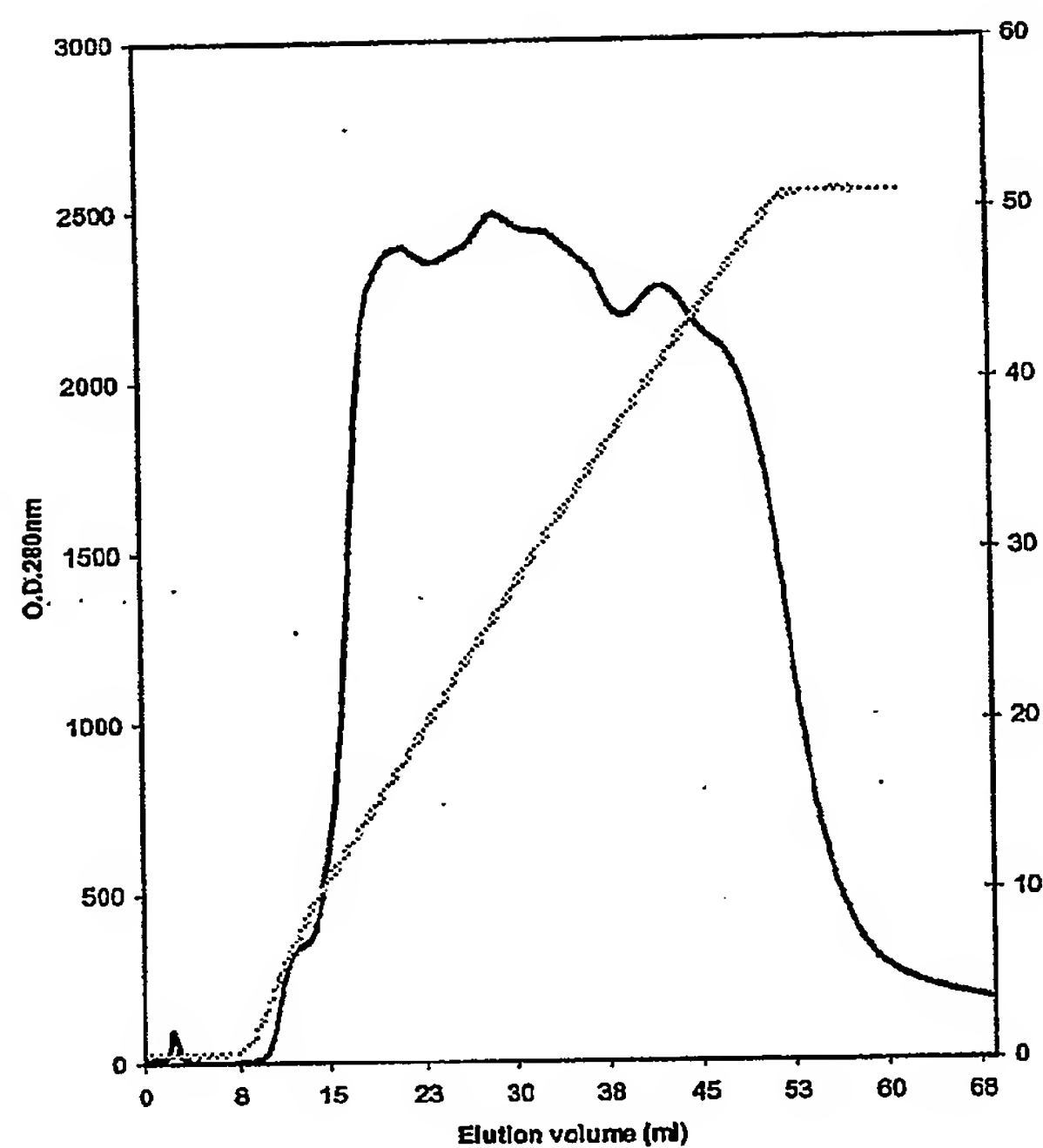


Figure 61: AE column Tyr10/Ser17

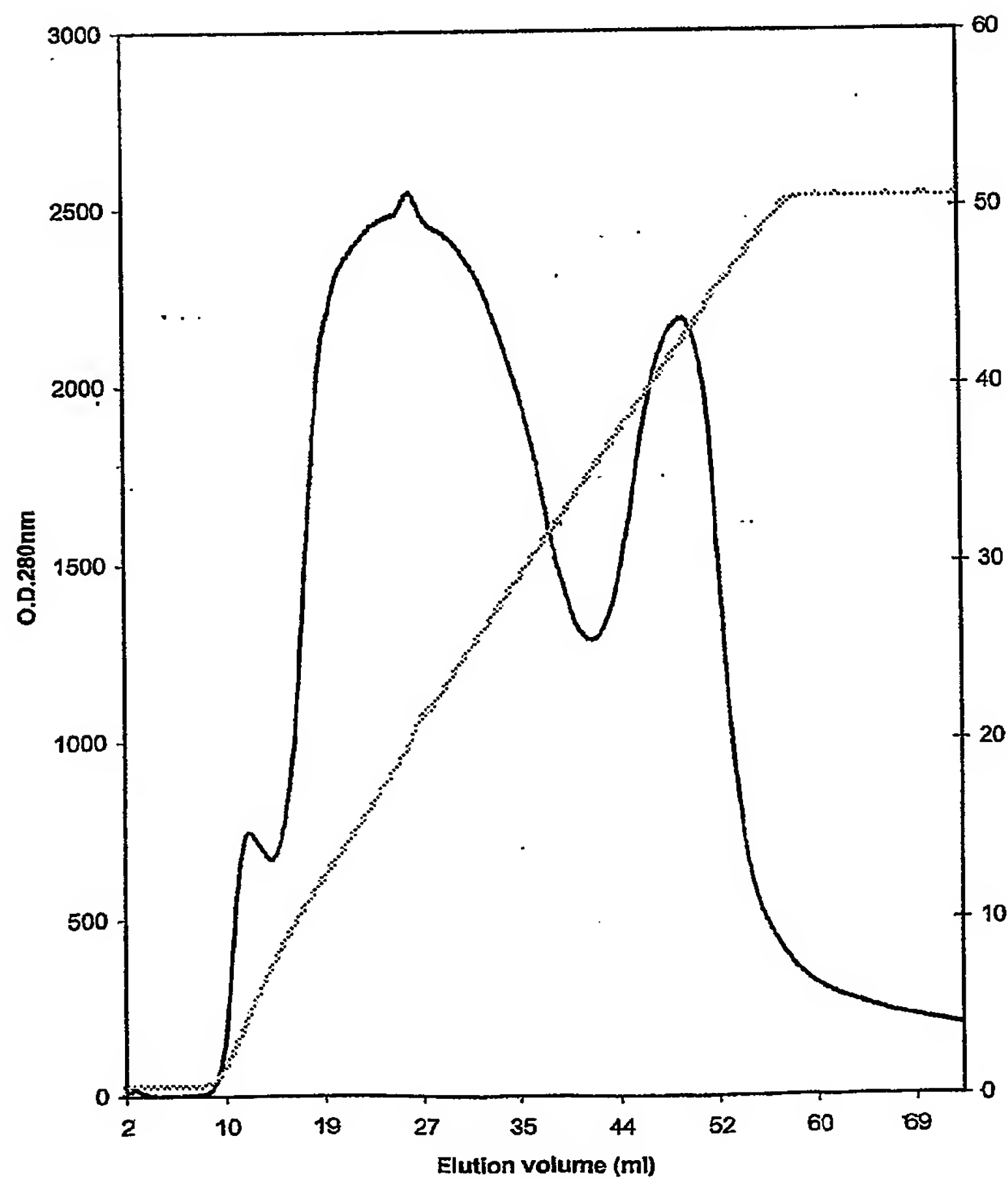


Figure 62: AE column Thr45/Asp59

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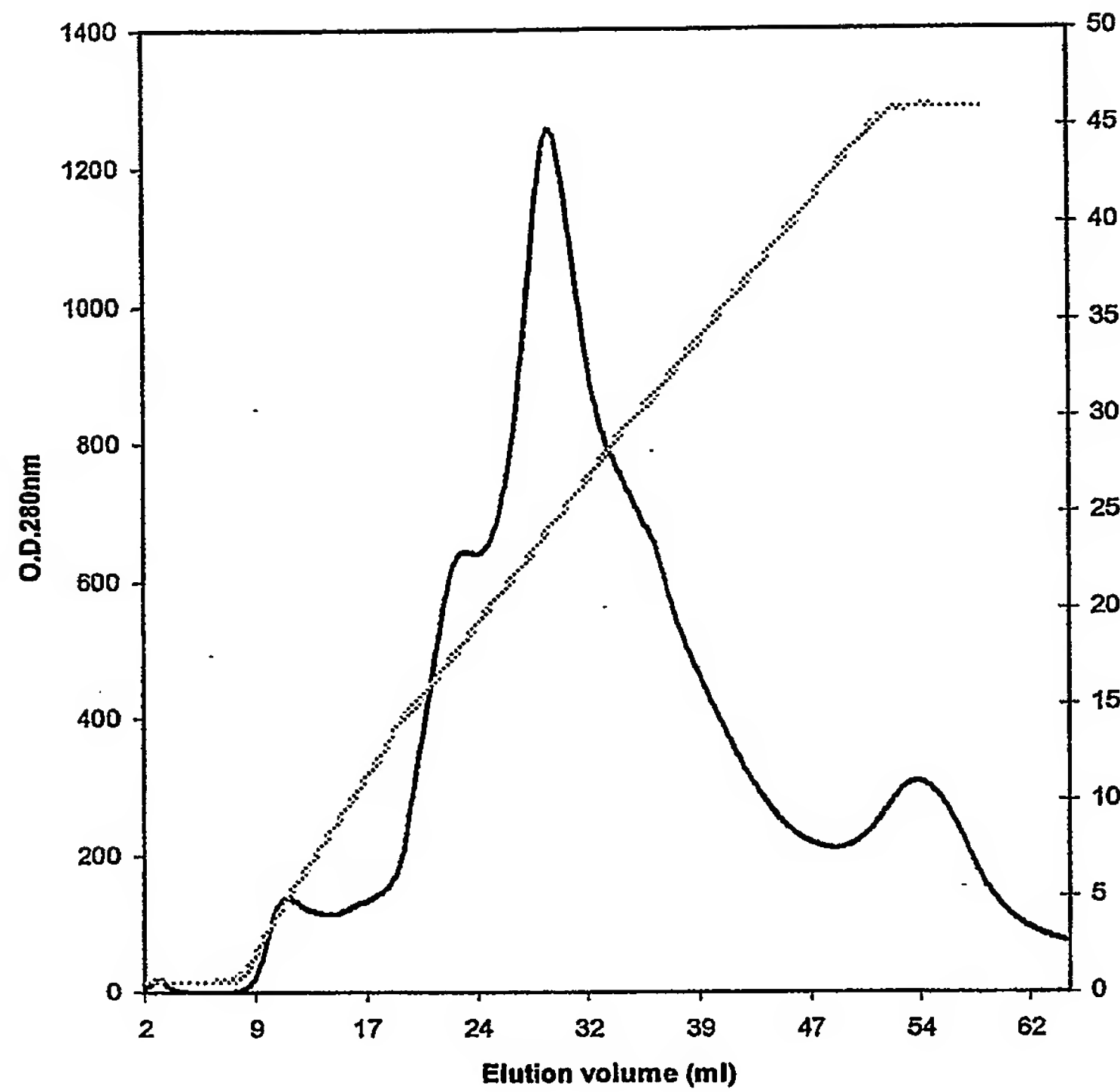


Figure 63: AE column Met52/Gly55

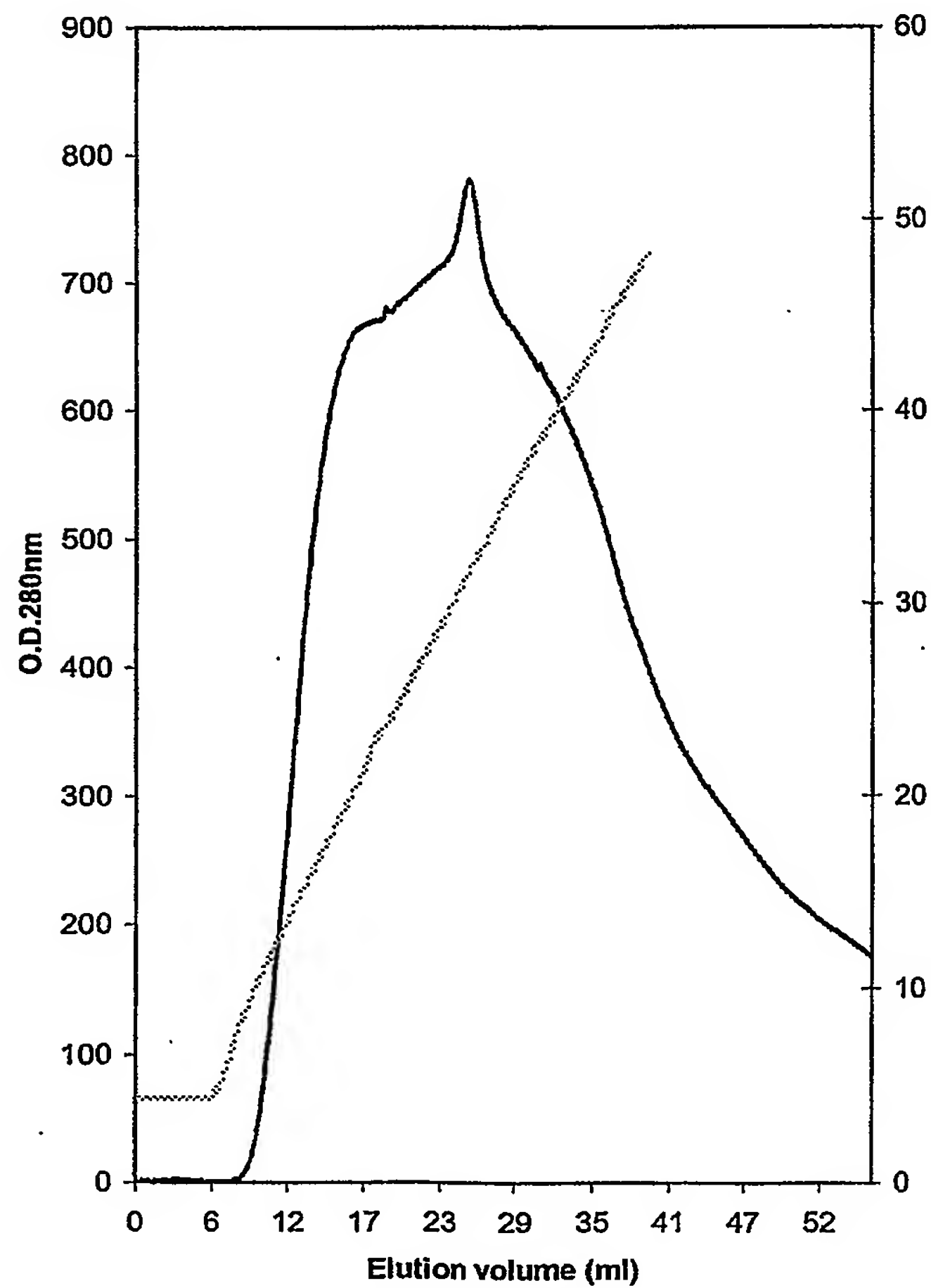


Figure 64: AE column Ser15/Glu15

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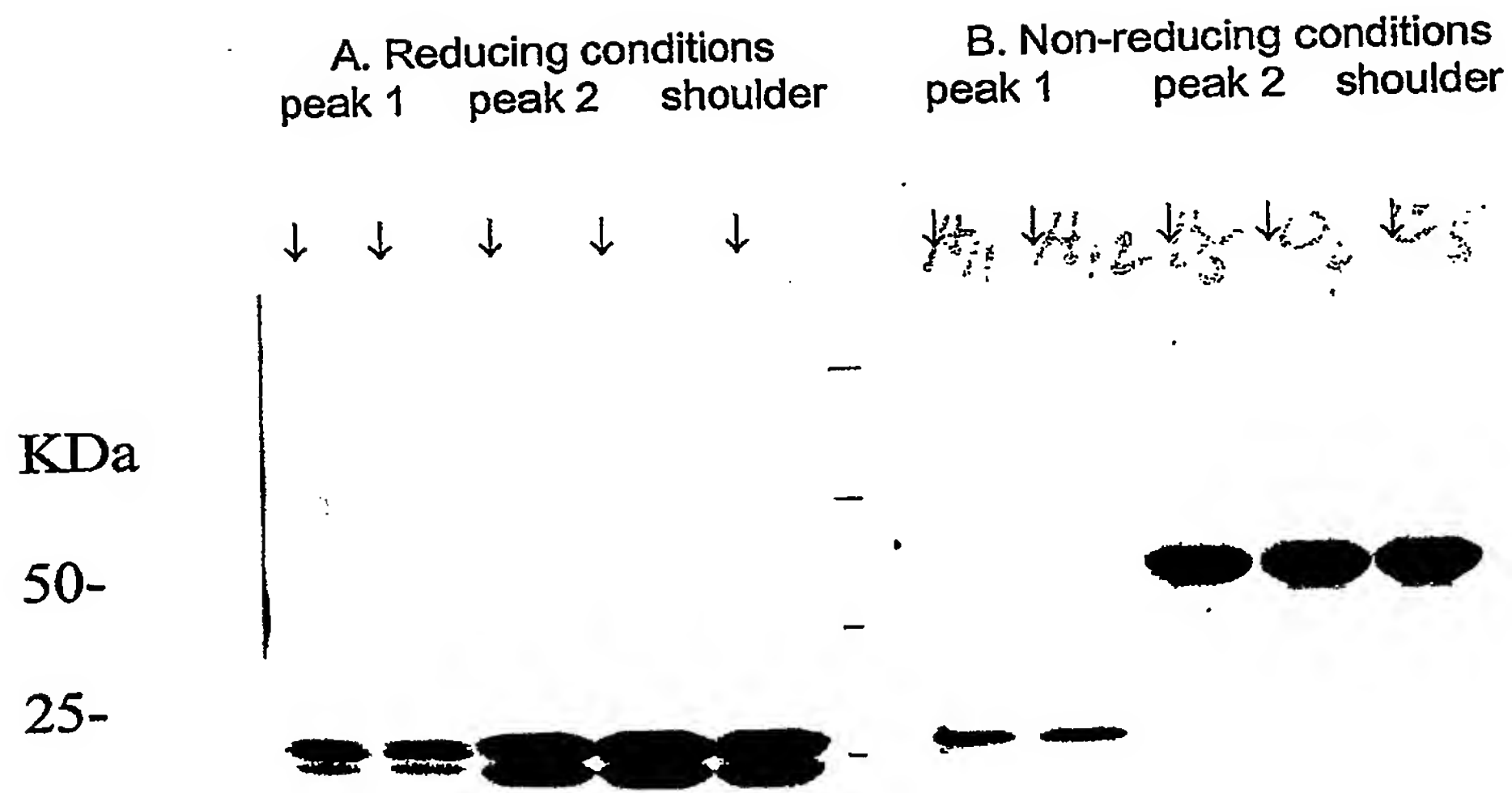


Figure 65: SDS PAGE Thr 48 / Ser 57

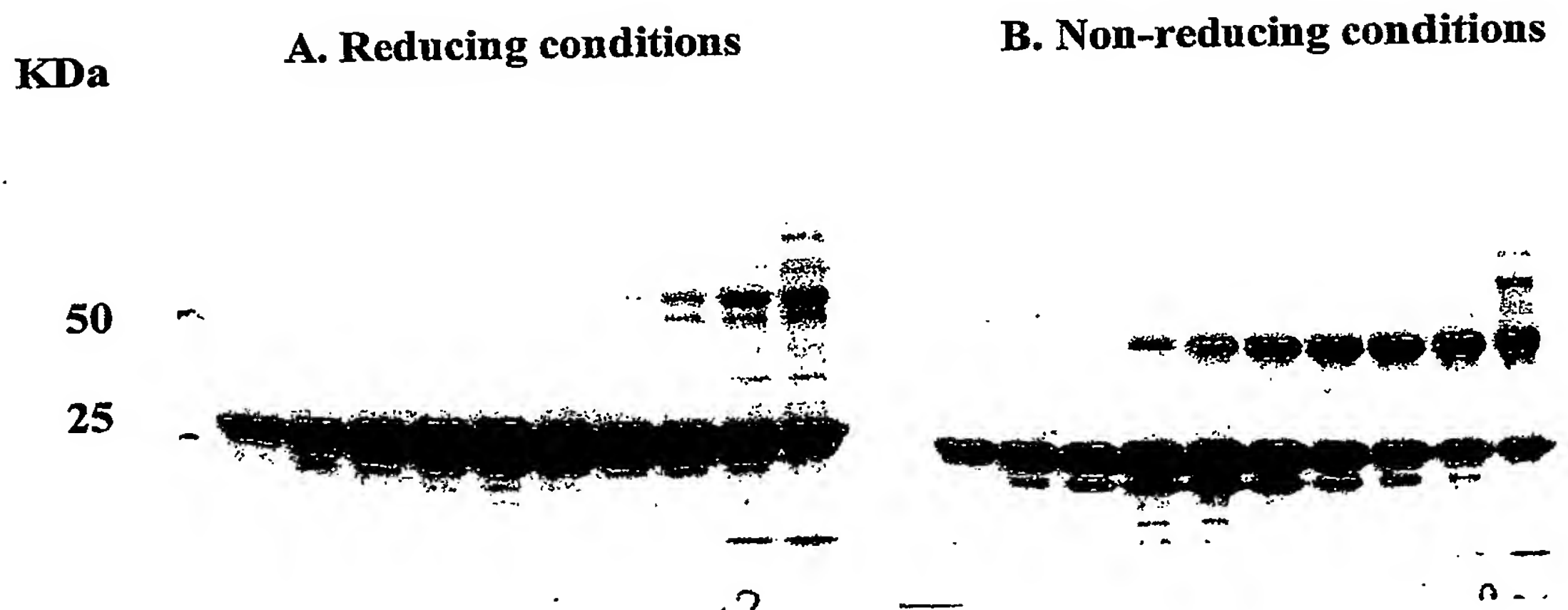


Figure 66: SDS PAGE Thr 45 / Ser 77

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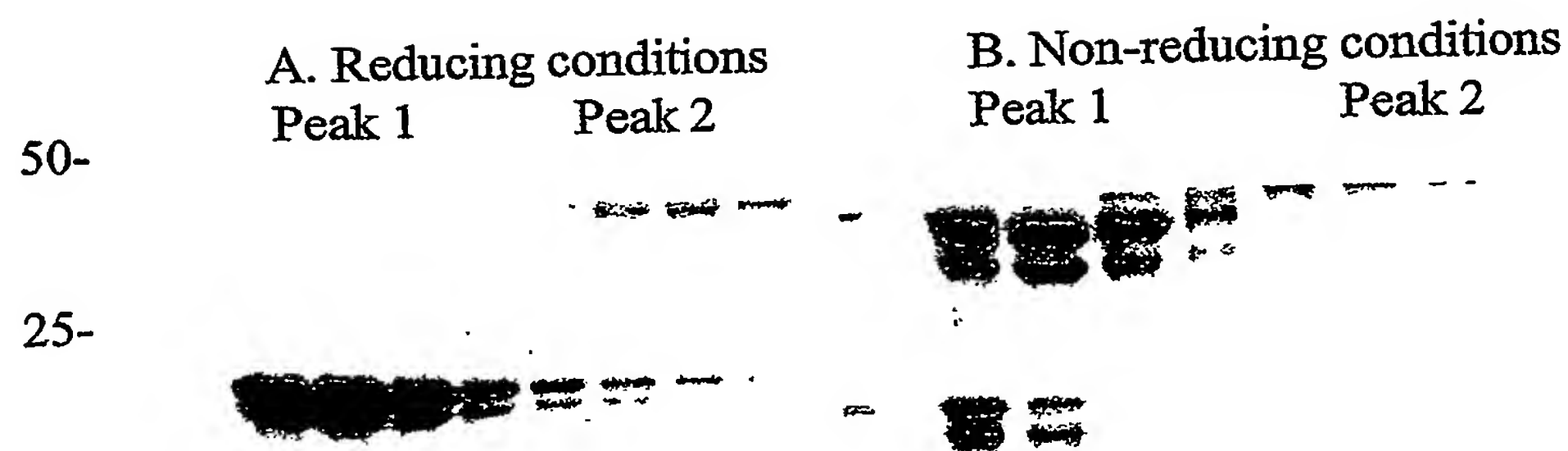


Figure 67 SDS PAGE Tyr 10 / Ser 17

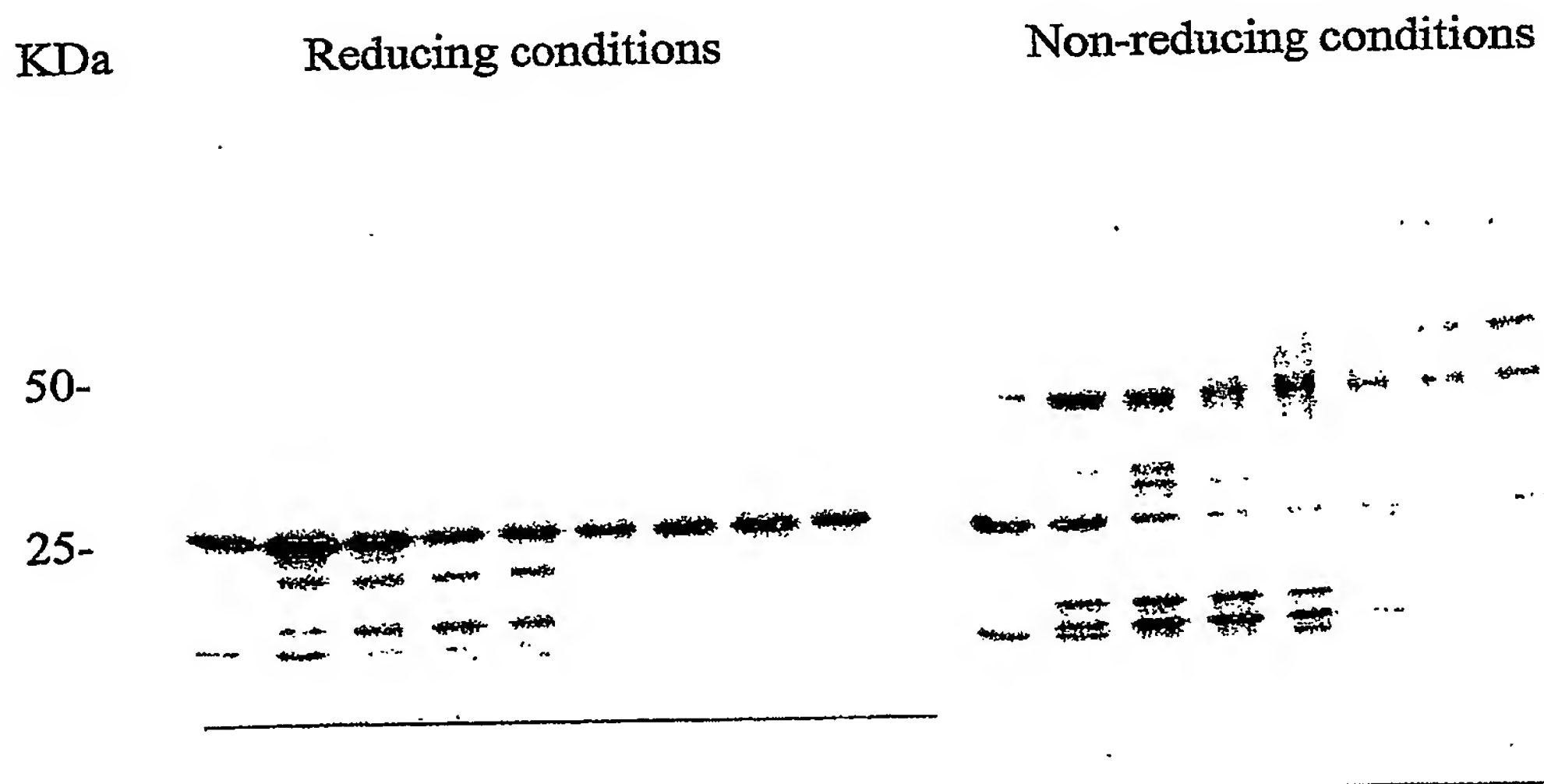


Figure 68 SDS PAGE Thr 45 / Asp 59

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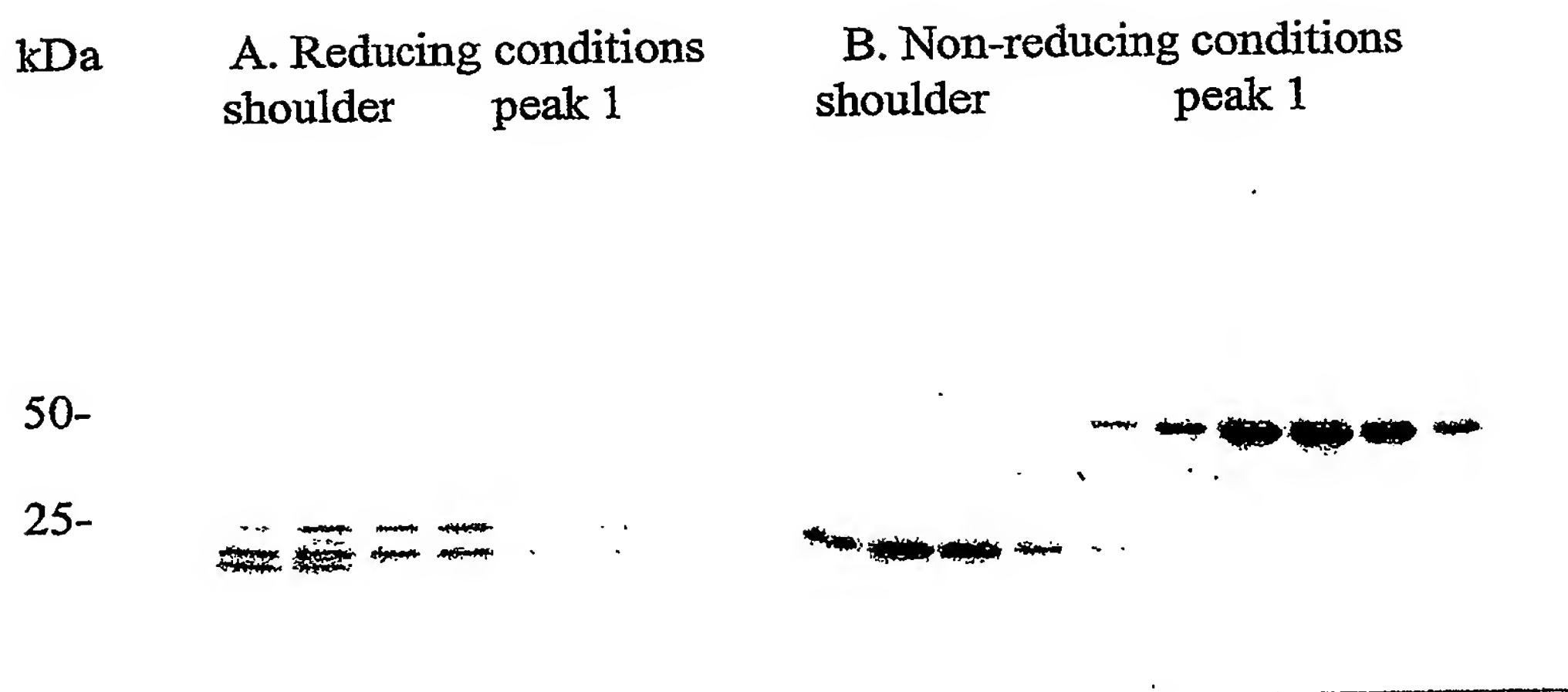


Figure 69: SDS PAGE Met52/Gly55

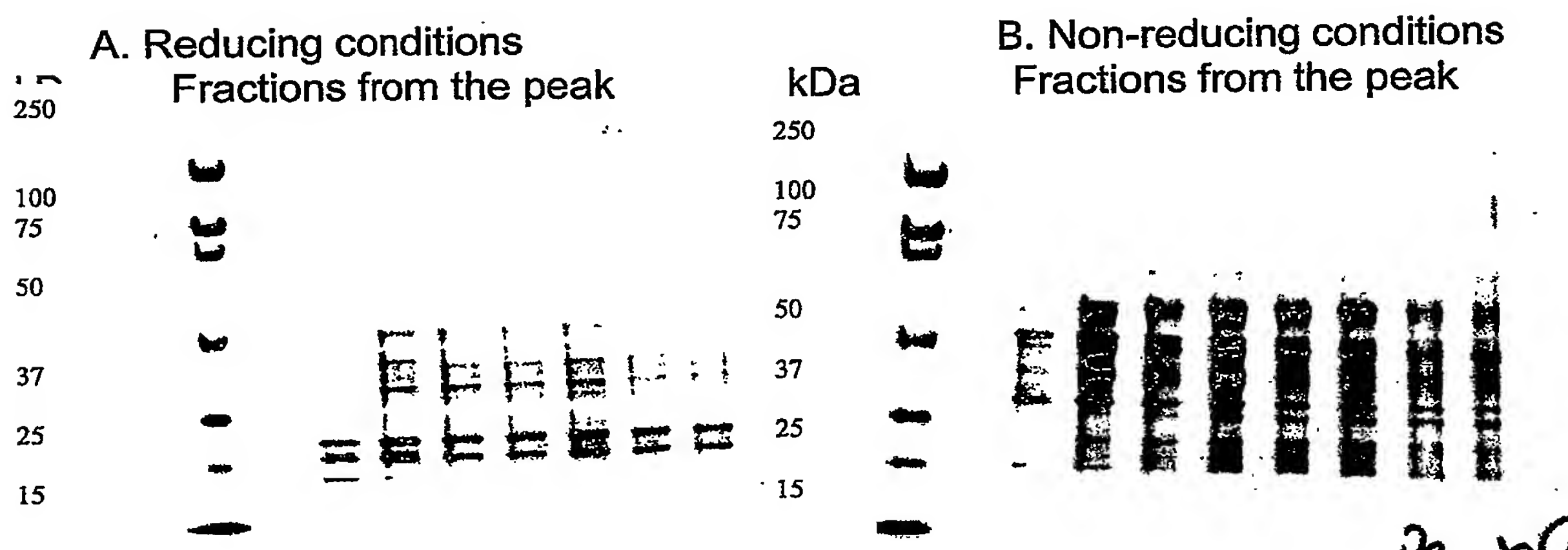


Figure 70: SDS PAGE Ser 15/Glu 15

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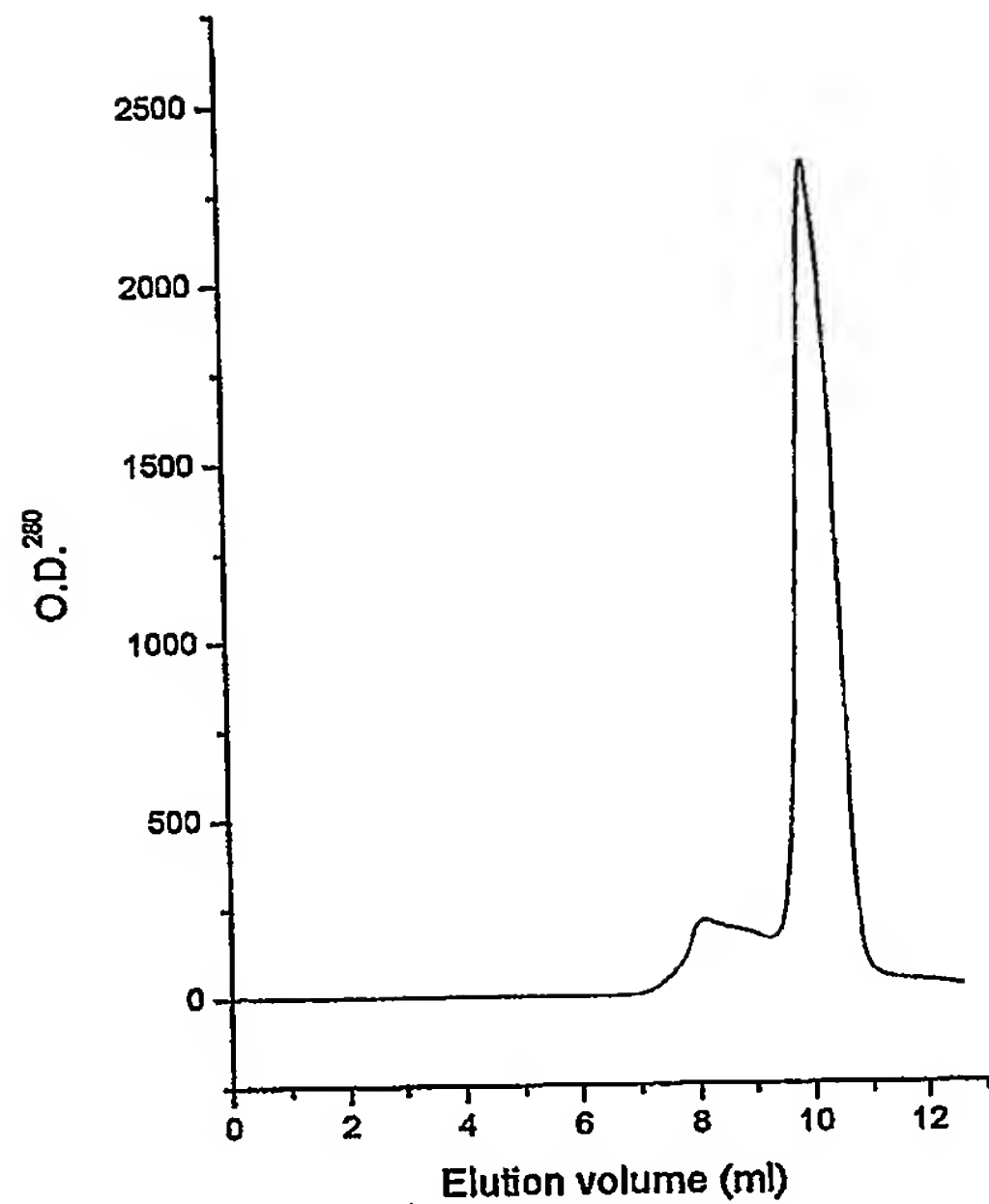


Figure 71: SEC Thr48/Ser57

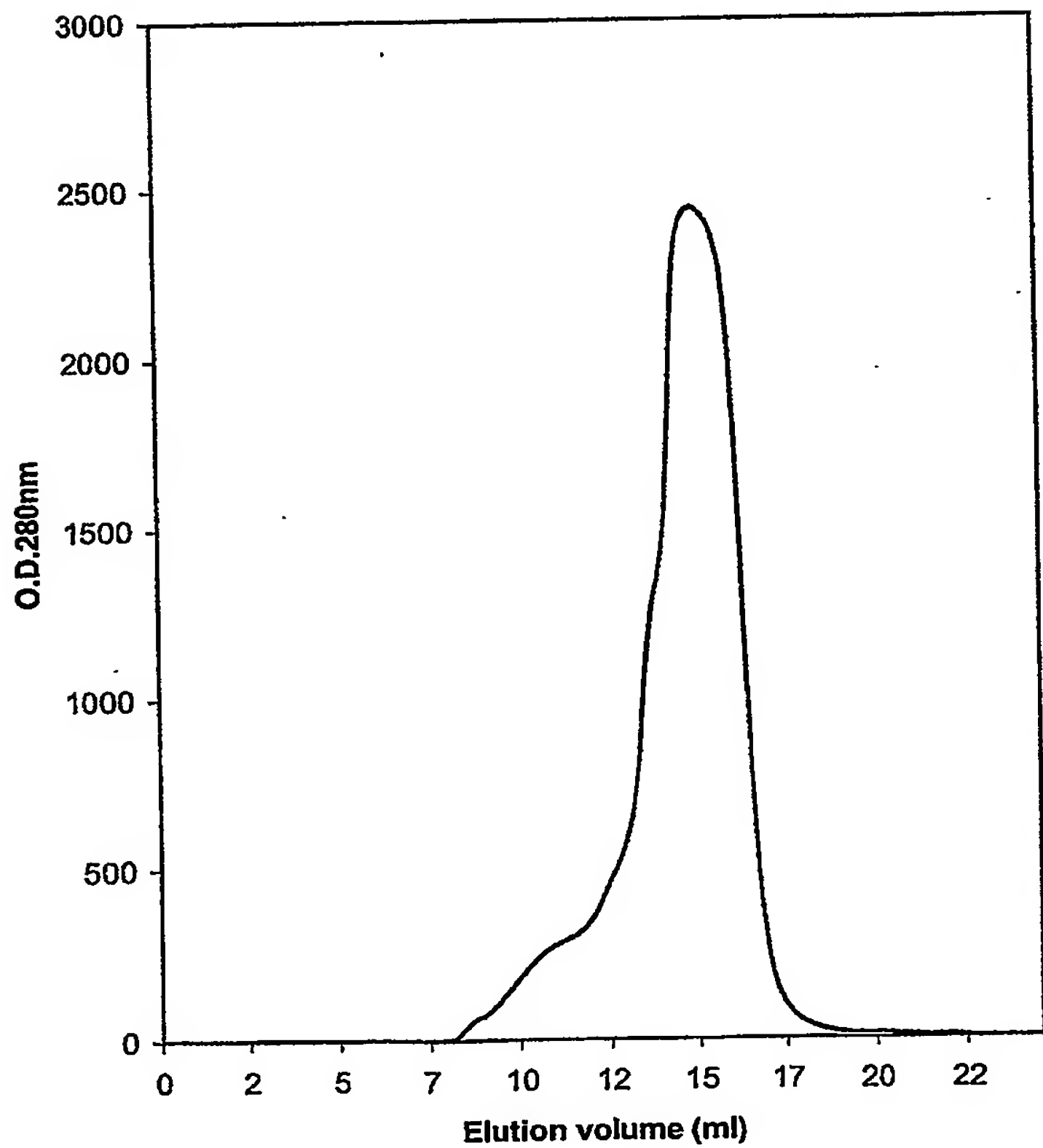
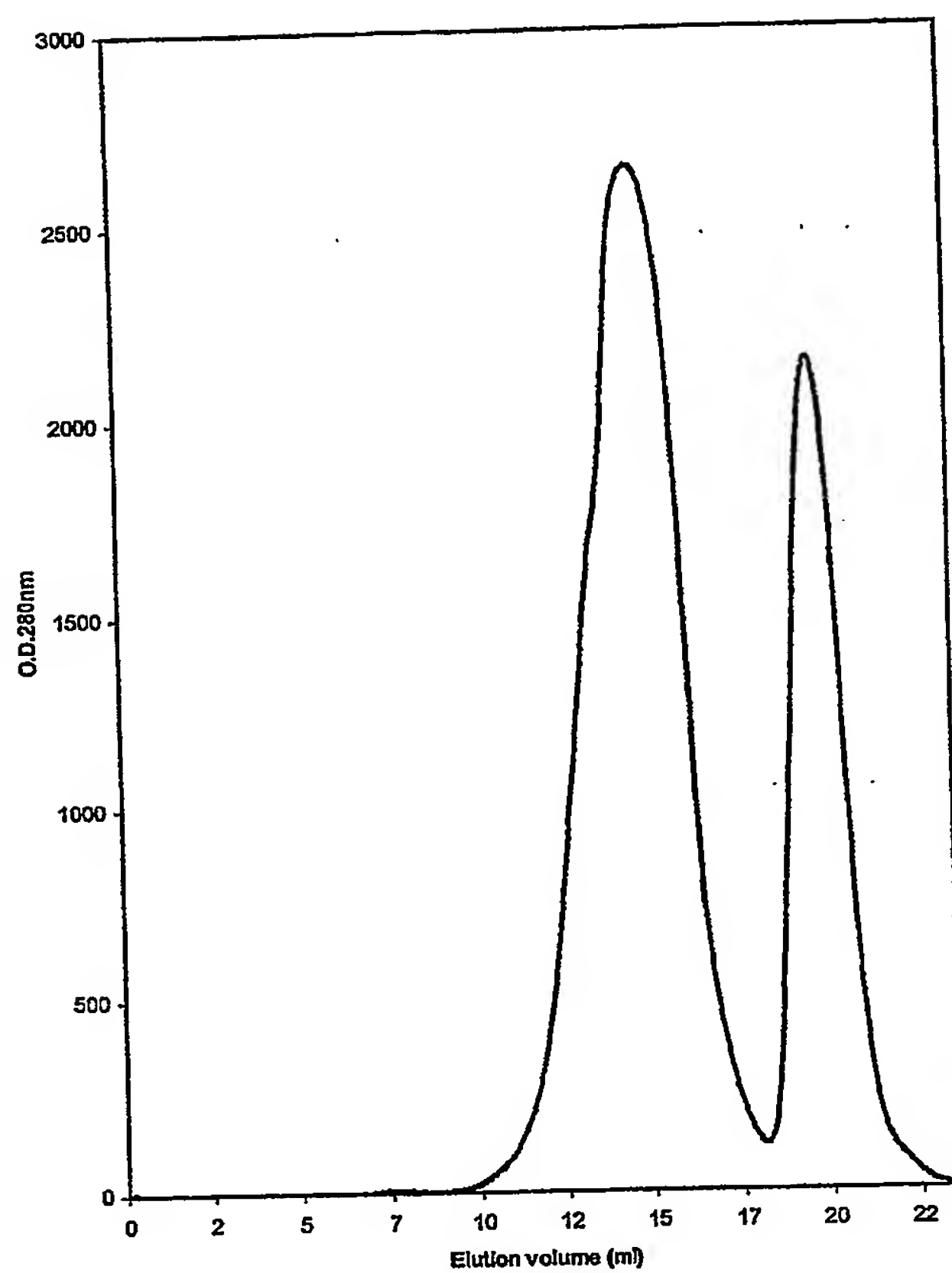
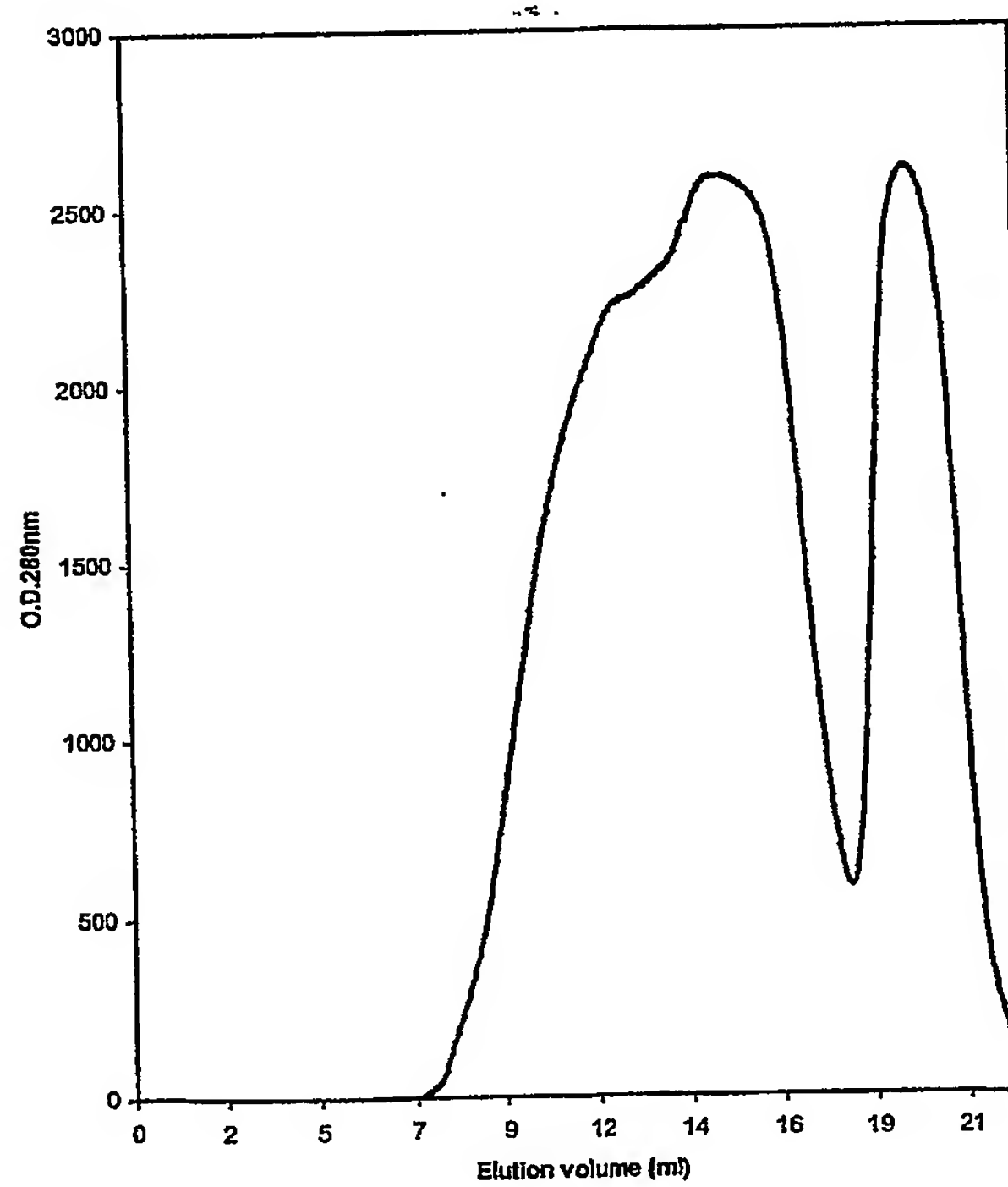


Figure 72: SEC Thr45/Ser77 (200 HR column)

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**Figure 73: SEC Tyr 10 / Ser 17 (200 HR Column)****Figure 74: SEC Thr 45/Asp 59 (200 HR Column)**

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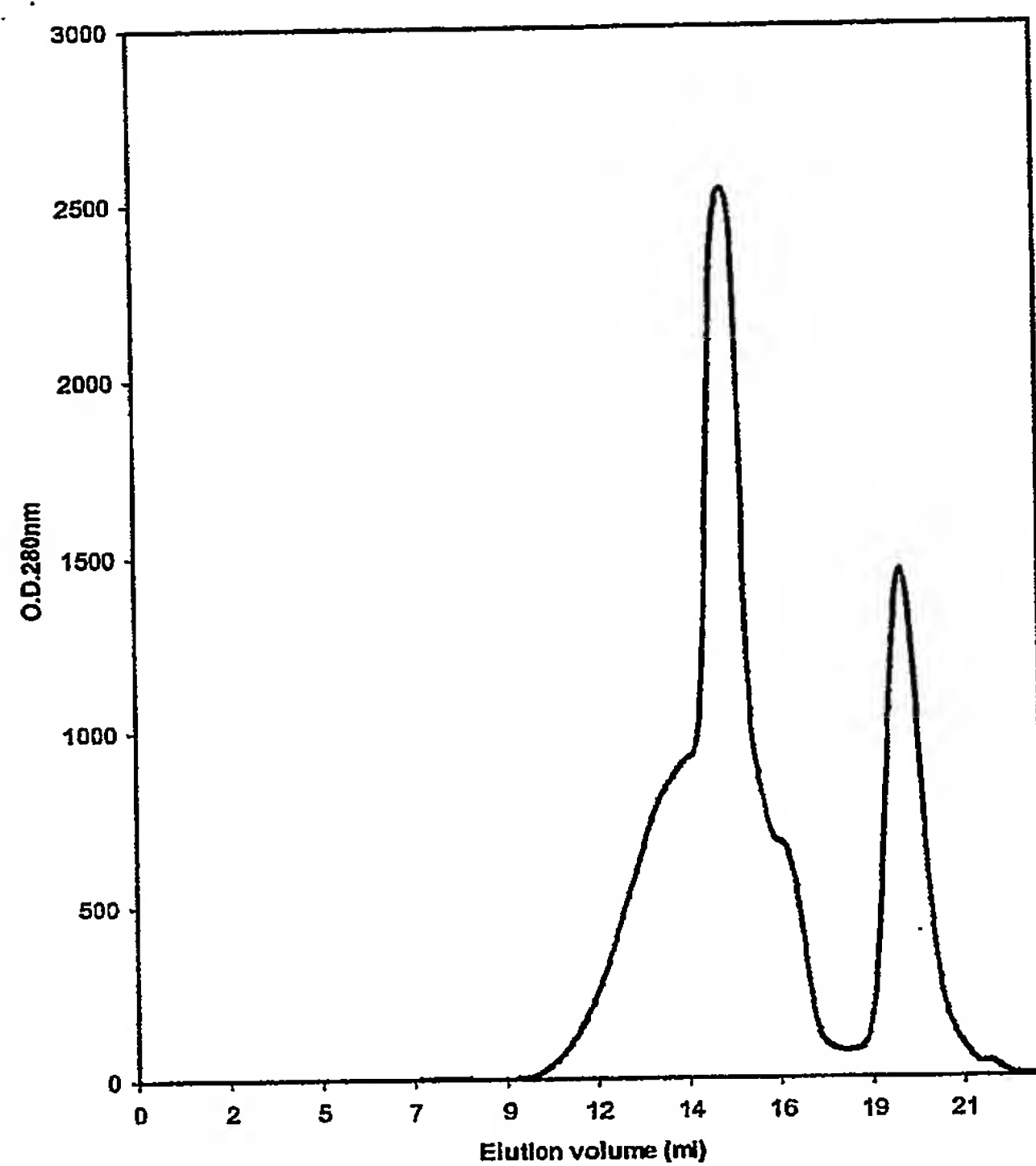


Figure 75 SEC Met 52 / Gly 55 (200 HR Column)

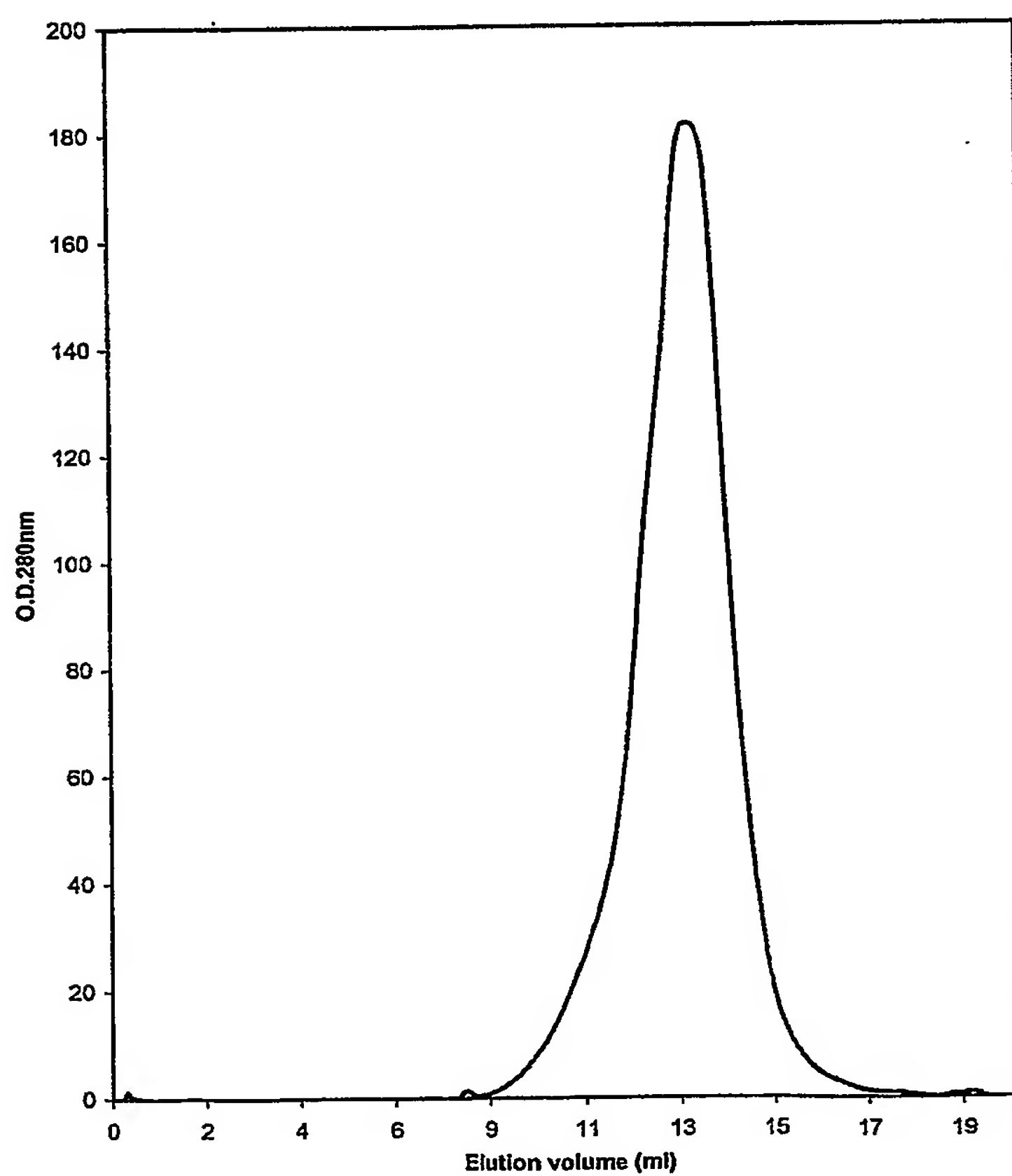


Figure 76: SEC Ser 15/Glu 15 (200 HR Column)

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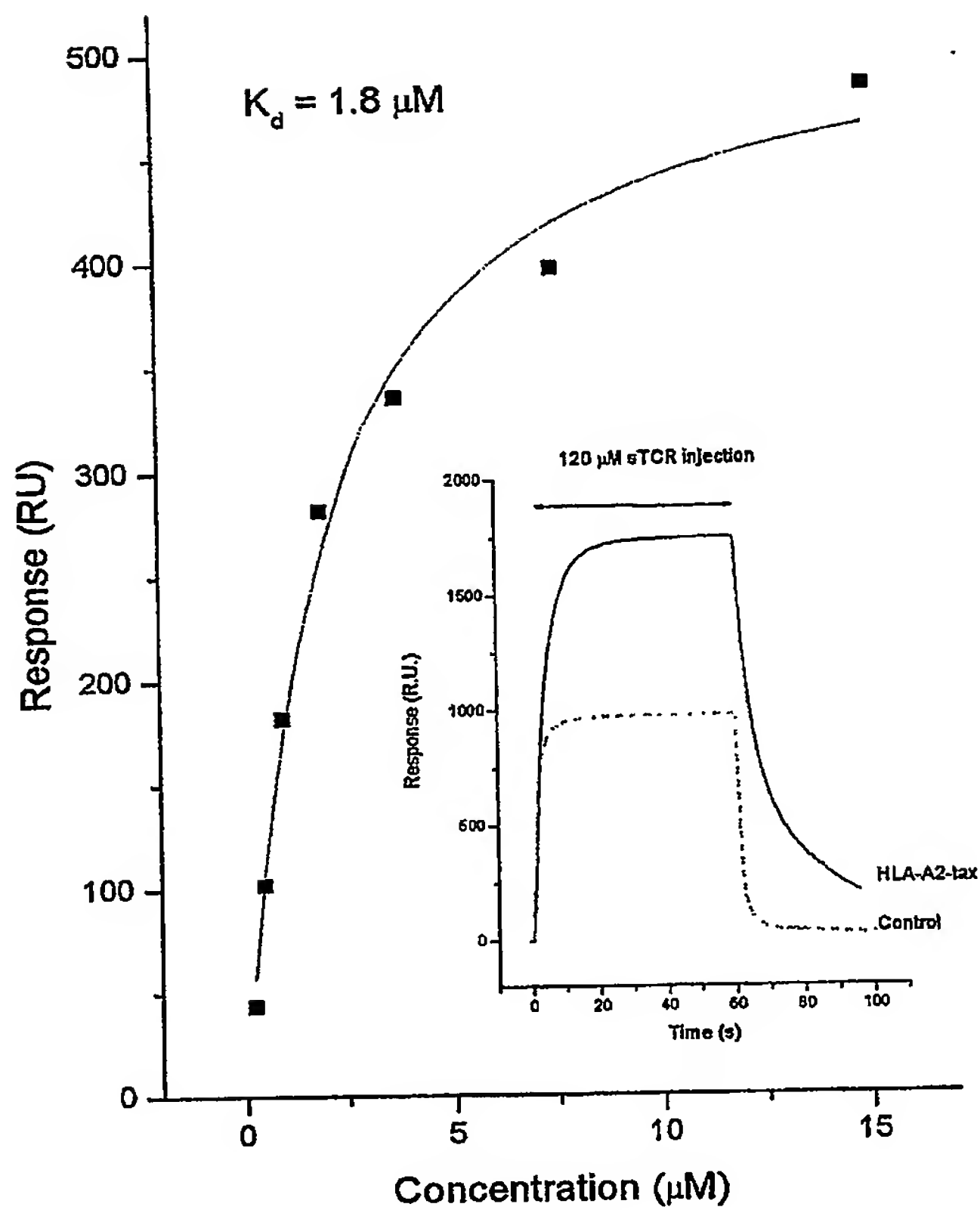


Figure 77: Thr 48/Ser 57

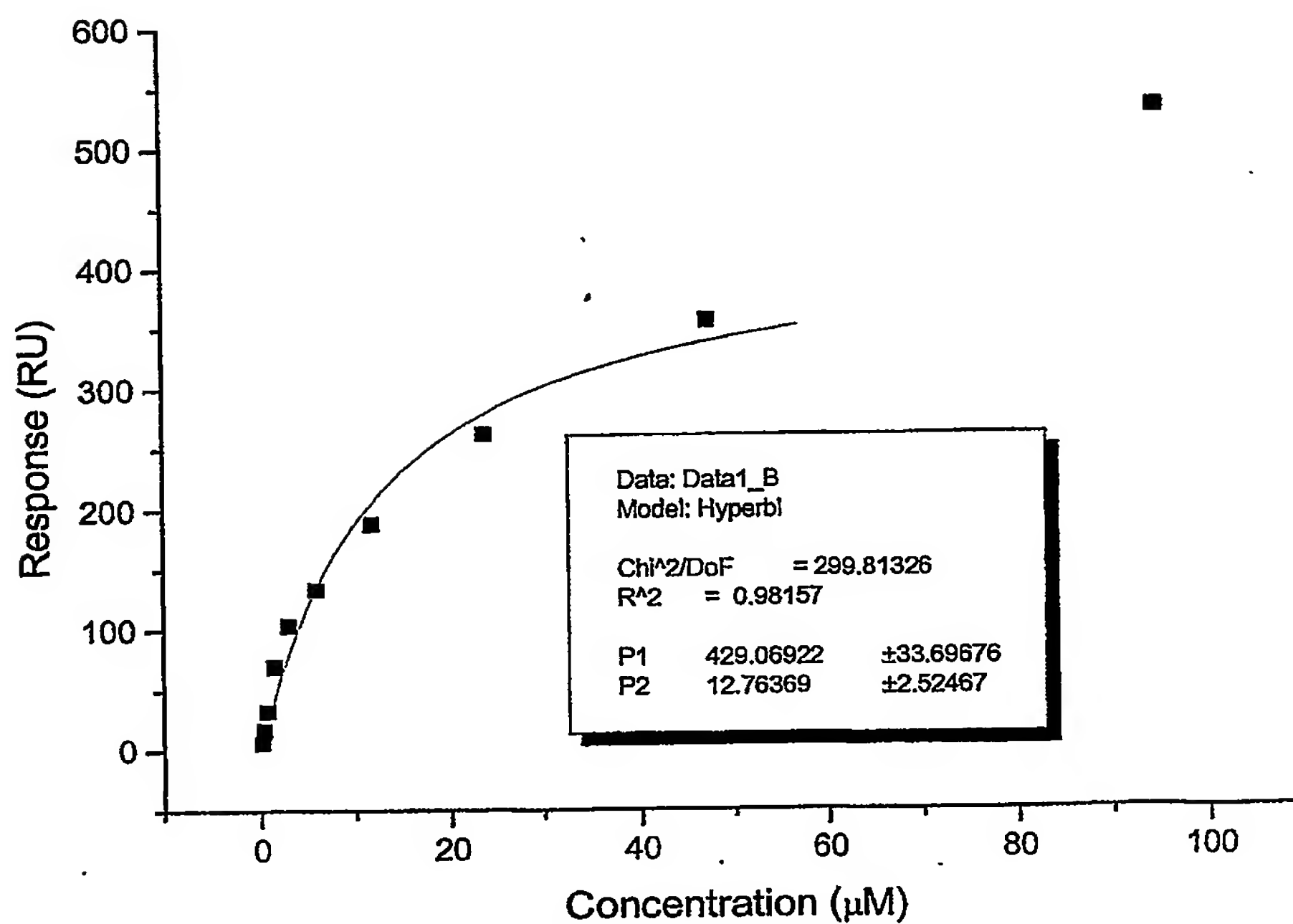


Figure 78: Thr 45/Ser 77

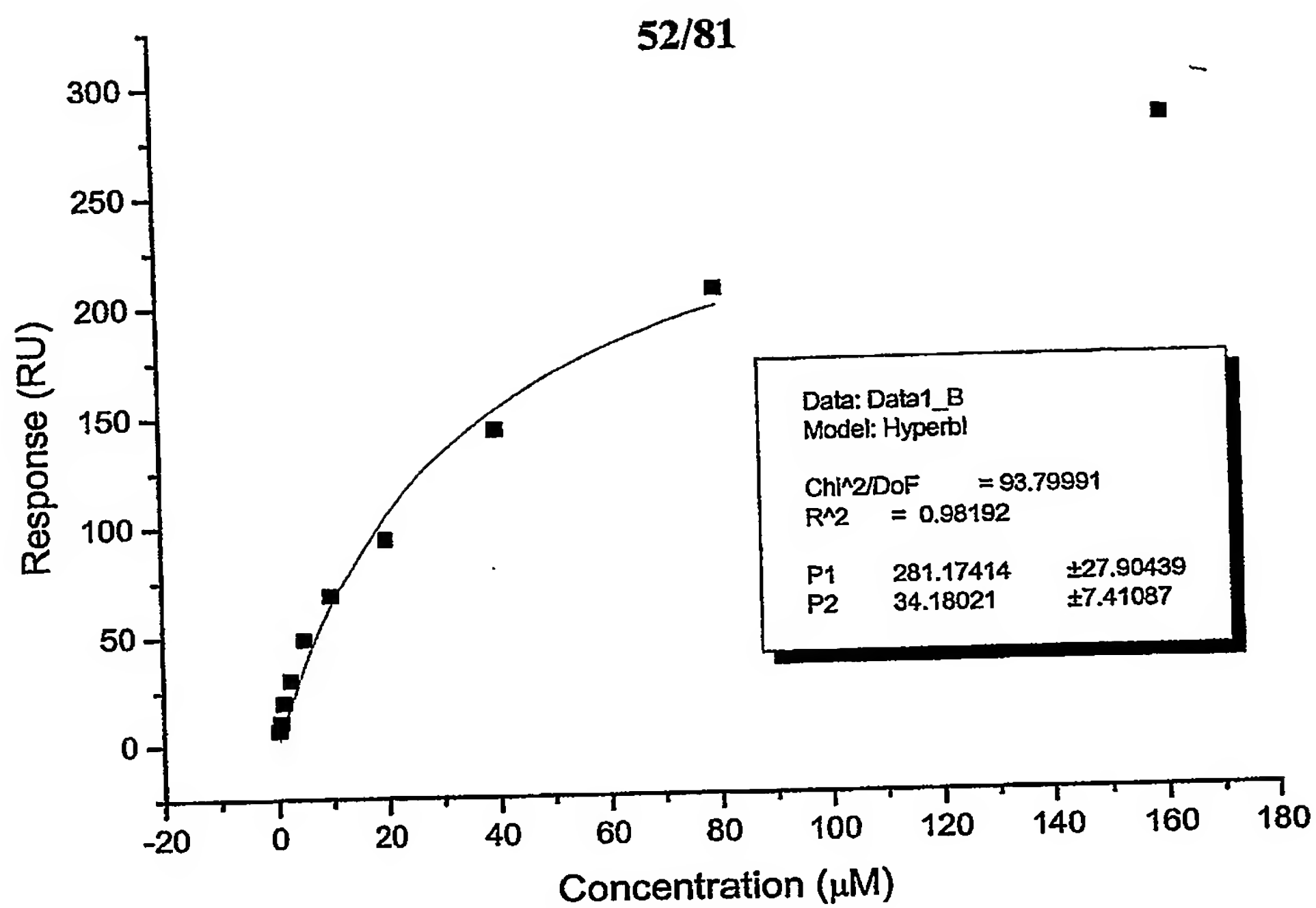


Figure 79: Tyr 10/Ser 17

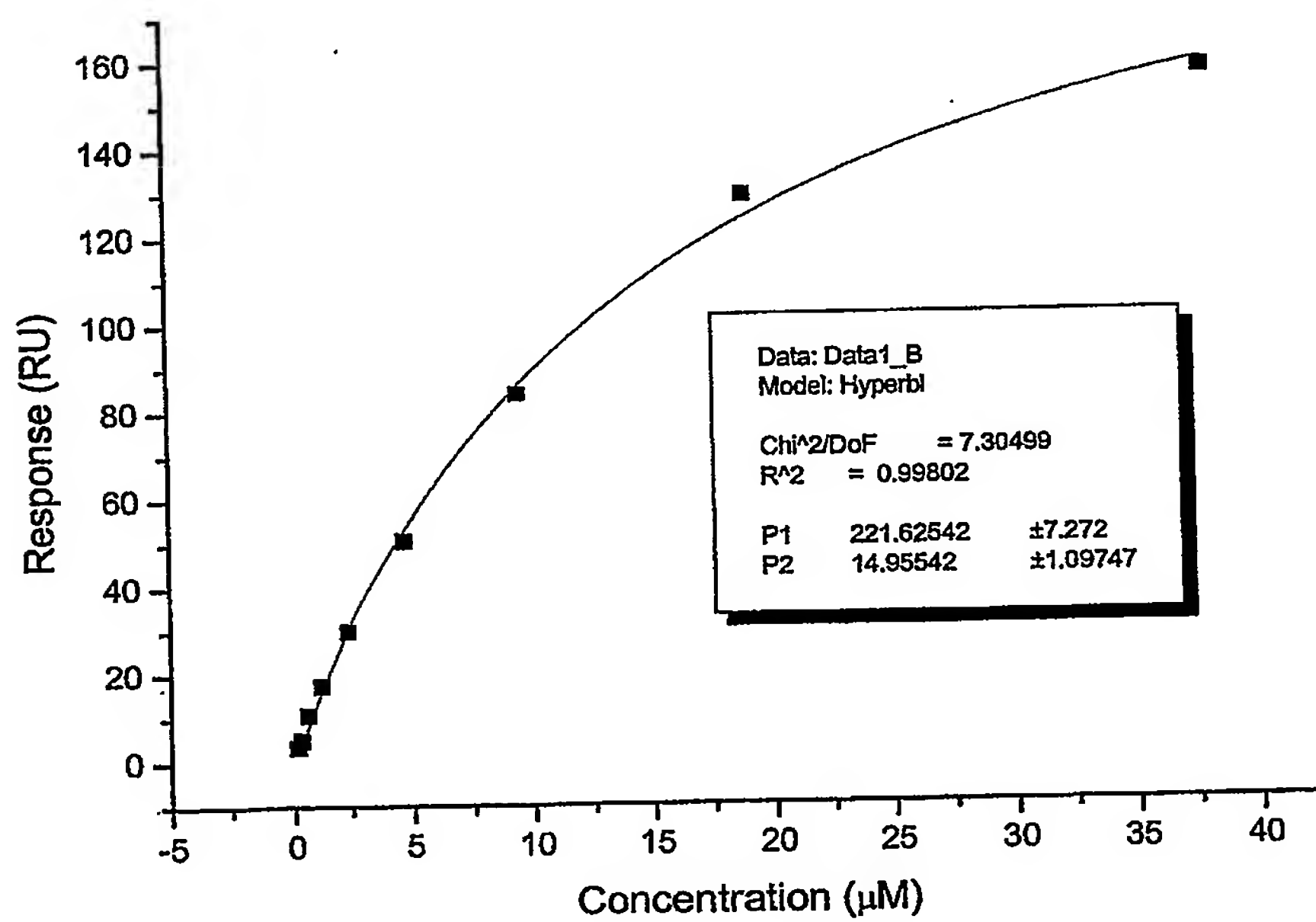


Figure 80: Thr 45/Asp 59

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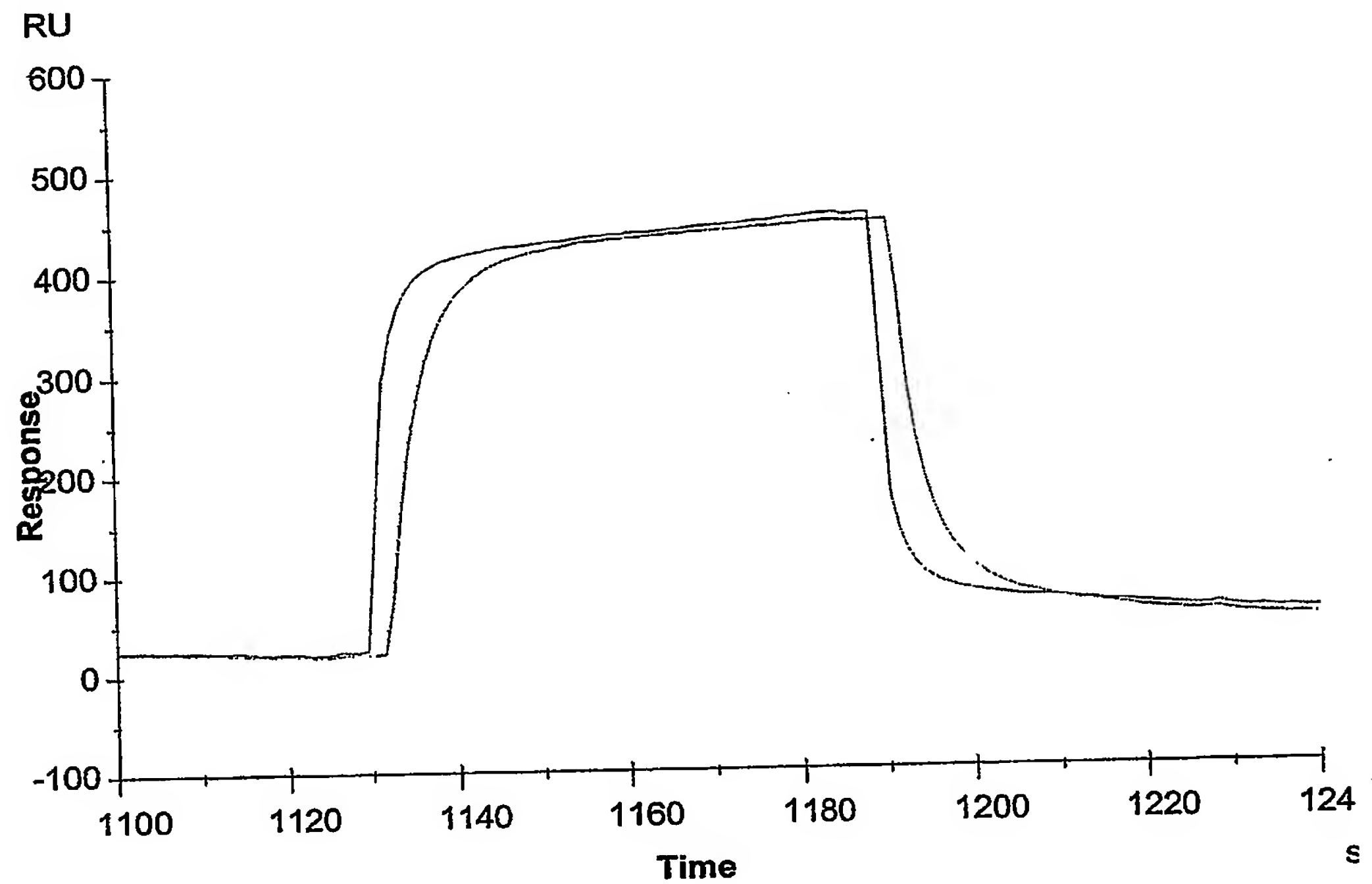


Figure 81: Met 52/Gly 55

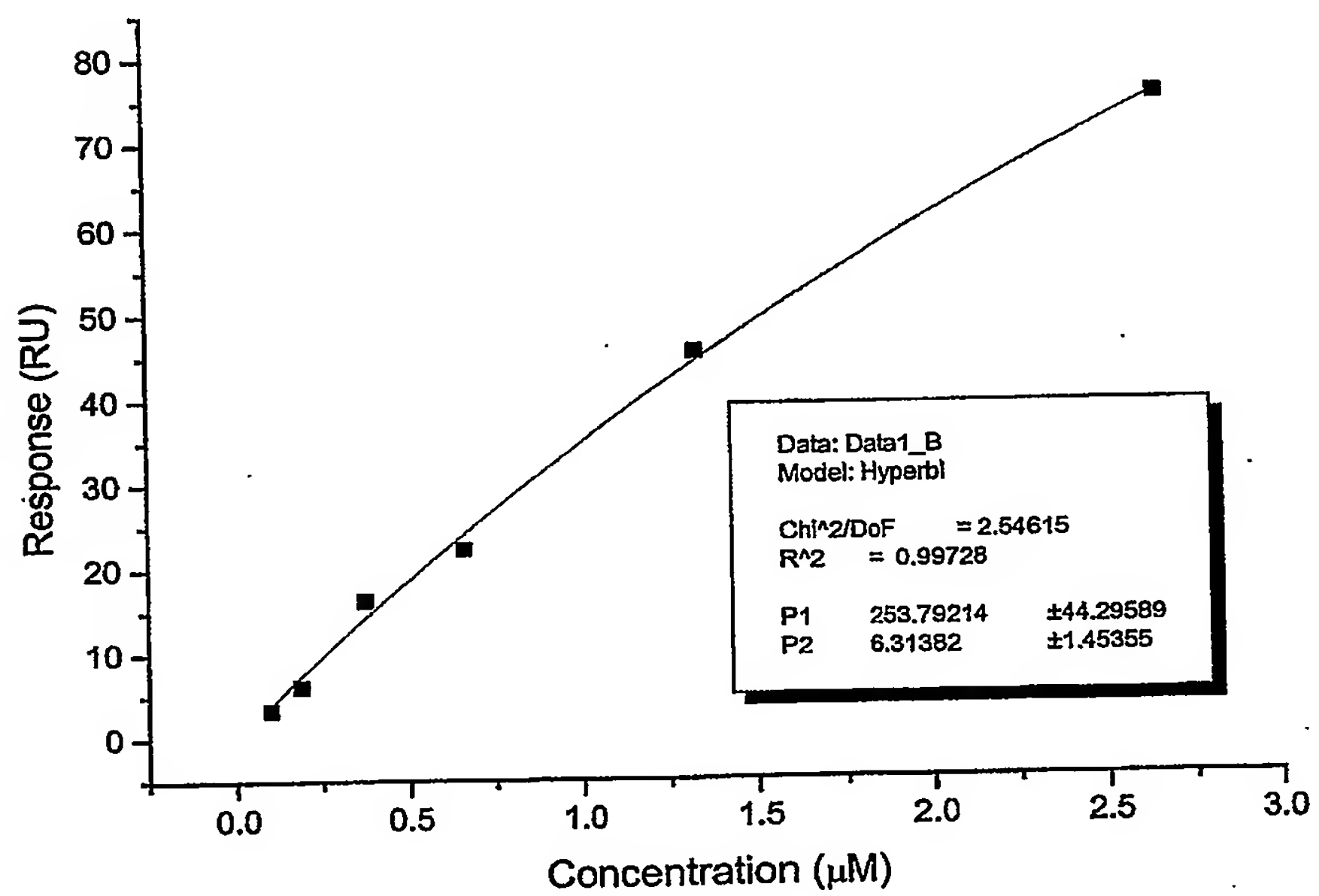


Figure 82: Ser 15/Glu 15

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Figure 83a

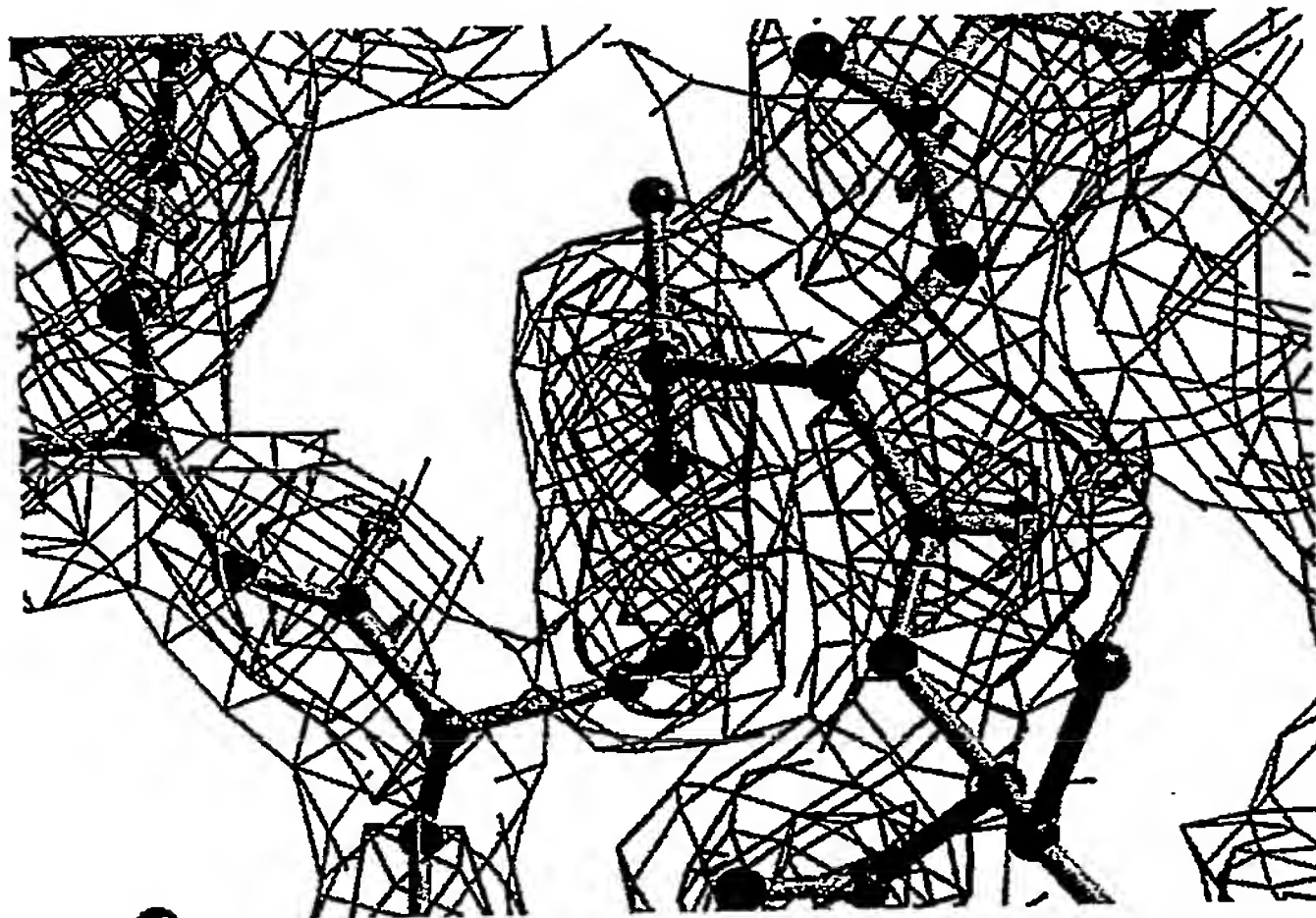
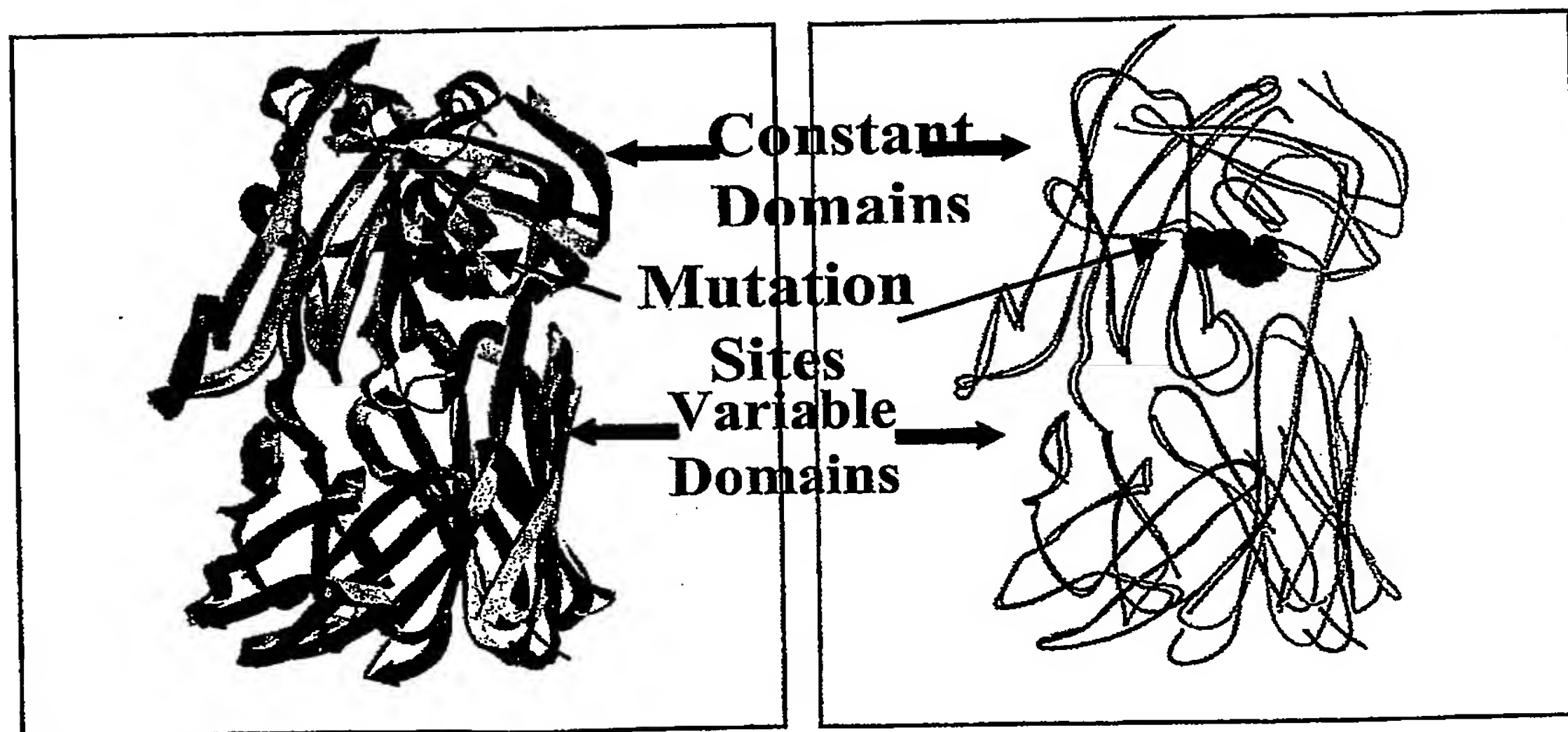


Figure 83b



Figure 84





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Figure 85a

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Figure 85b

M G V T Q T P K F Q V L K T G Q S M T L Q C A Q D M N H E Y M
S W Y R Q D P G M G L R L I H Y S V G A G I T D Q G E V P N G
Y N V S R S T T E D F P L R L L S A A P S Q T S V Y F C A S S
Y V G N T G E L F F G E G S R L T V L E D L K N V F P P E V A
V F E P S E A E I S H T Q K A T L V C L A T G F Y P D H V E L
S W W V N G K E V H S G V C T D P Q P L K E Q P A L N D S R Y
A L S S R L R V S A T F W Q D P R N H F R C Q V Q F Y G L S E
N D E W T Q D R A K P V T Q I V S A E A W G R A D G S G G G 
 Stop

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Figure 86a

atgggtgtcactcagacccccaaaattccaggtcctgaagacaggacagagcatgaca
ctgcagtgtgcccaggatatgaaccatgaatacatgtcctgggtatcgacaagaccca
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gtcaccagatcgtcagcgccgaggcctggggtagagcagacggatccggtgggtggt
catcatcaccatcatcactaa

Figure 86b

M G V T Q T P K F Q V L K T G Q S M T L Q C A Q D M N H E Y M
S W Y R Q D P G M G L R L I H Y S V G A G I T D Q G E V P N G
Y N V S R S T T E D F P L R L L S A A P S Q T S V Y F C A S S
Y V G N T G E L F F G E G S R L T V L E D L K N V F P P E V A
V F E P S E A E I S H T Q K A T L V C L A T G F Y P D H V E L
S W W V N G K E V H S G V C T D P Q P L K E Q P A L N D S R Y
A L S S R L R V S A T F W Q D P R N H F R C Q V Q F Y G L S E
N D E W T Q D R A K P V T Q I V S A E A W G R A D G S G G G
H H H H H Stop

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Figure 87

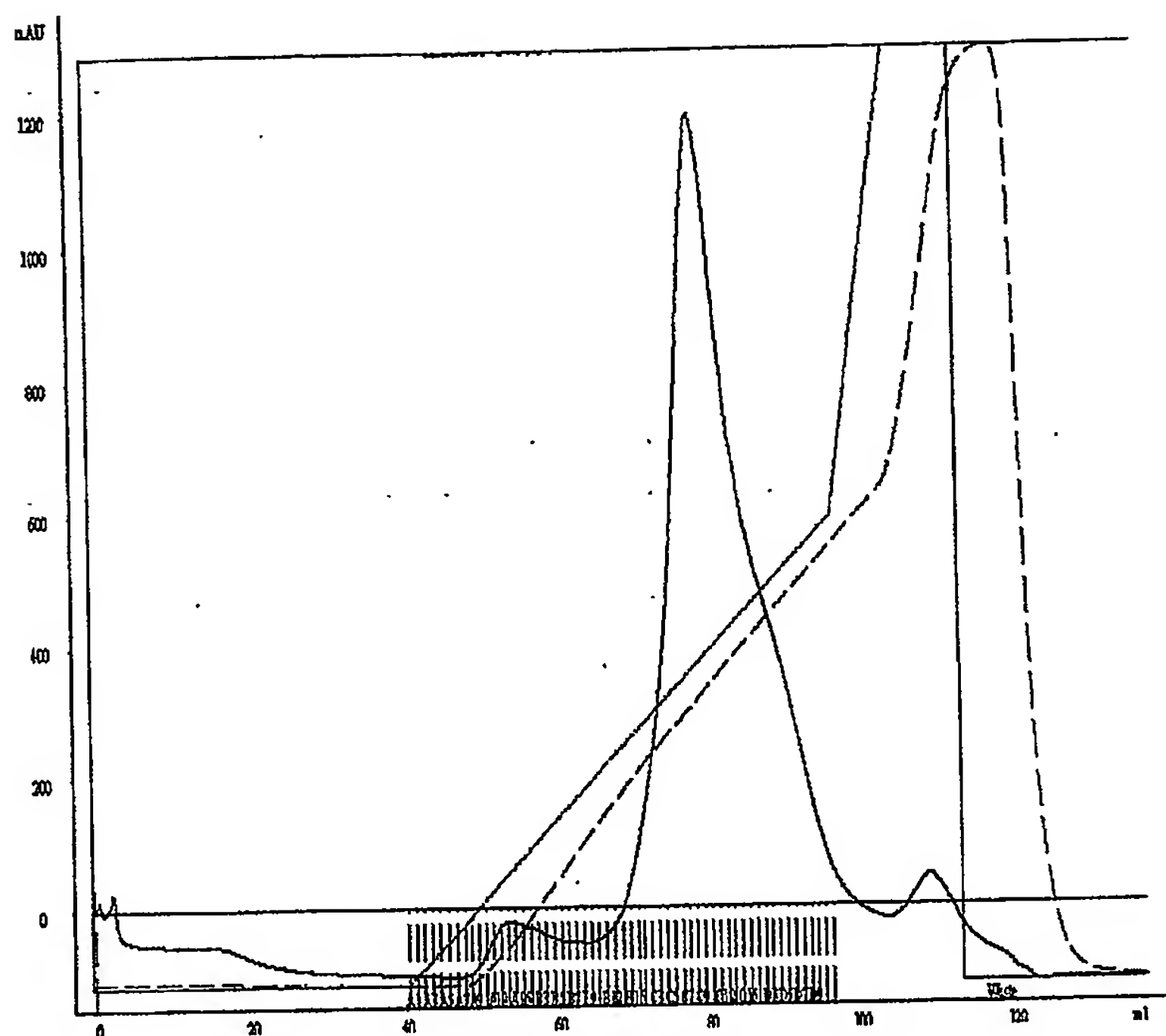
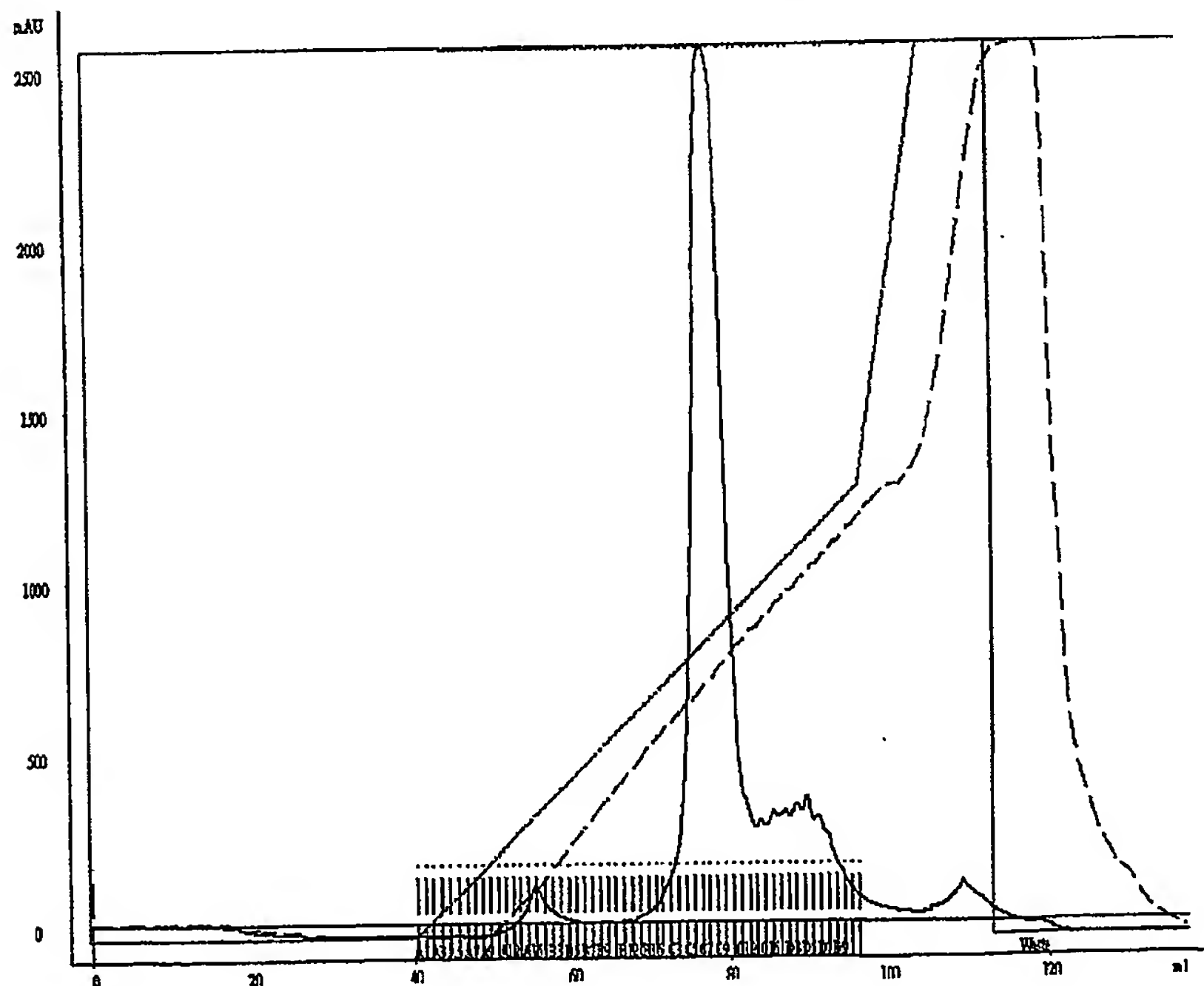


Figure 88



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Figure 89

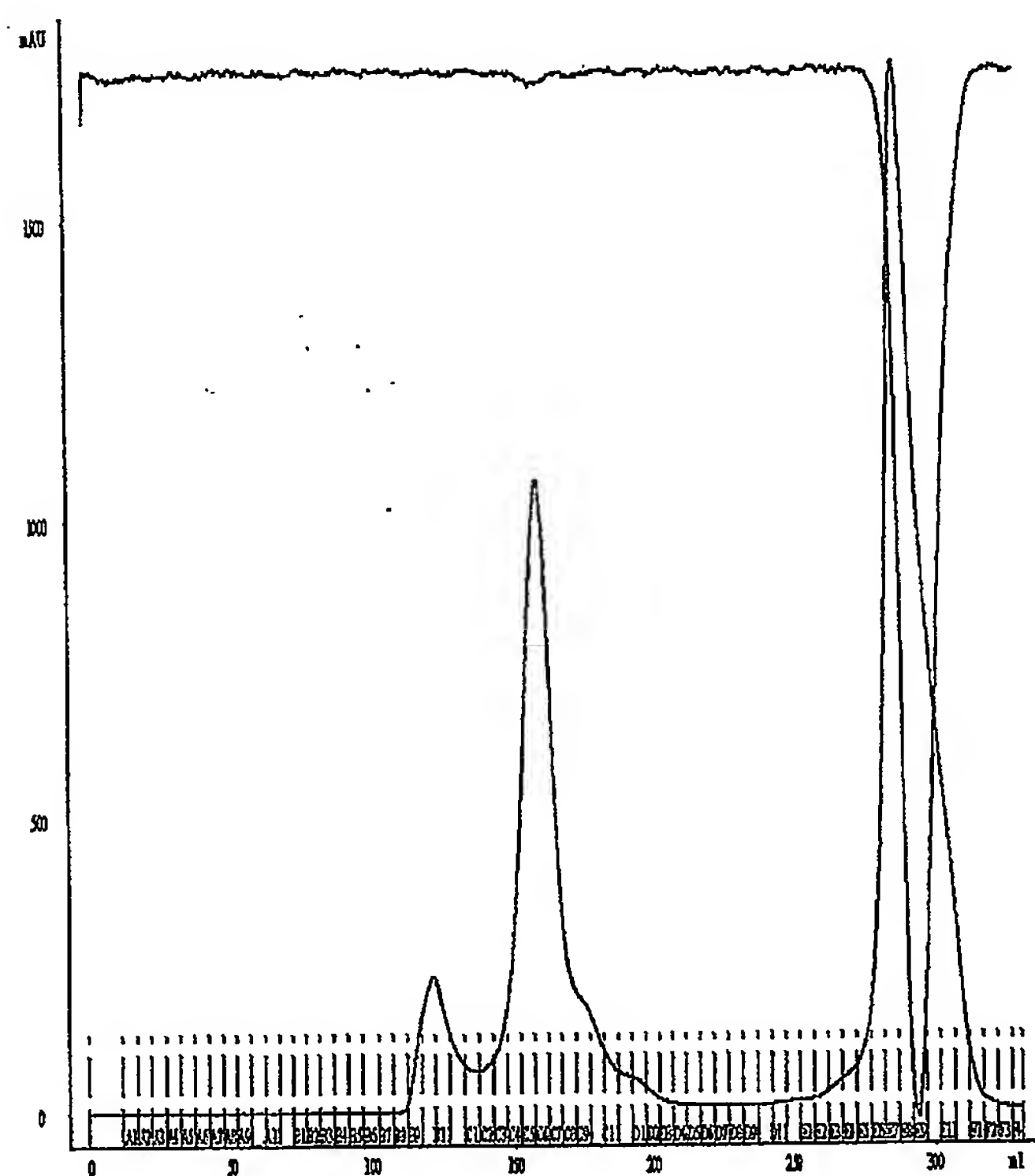
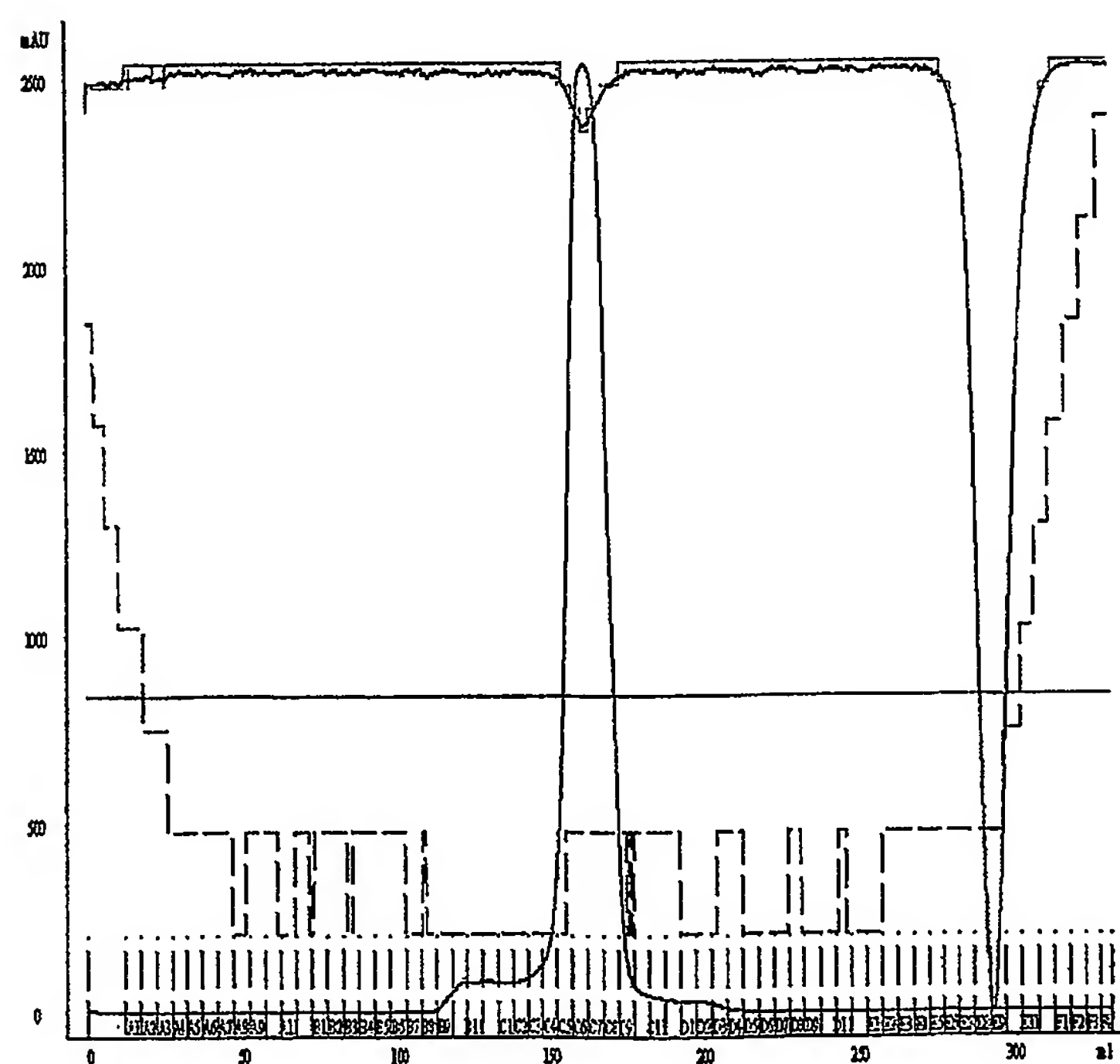
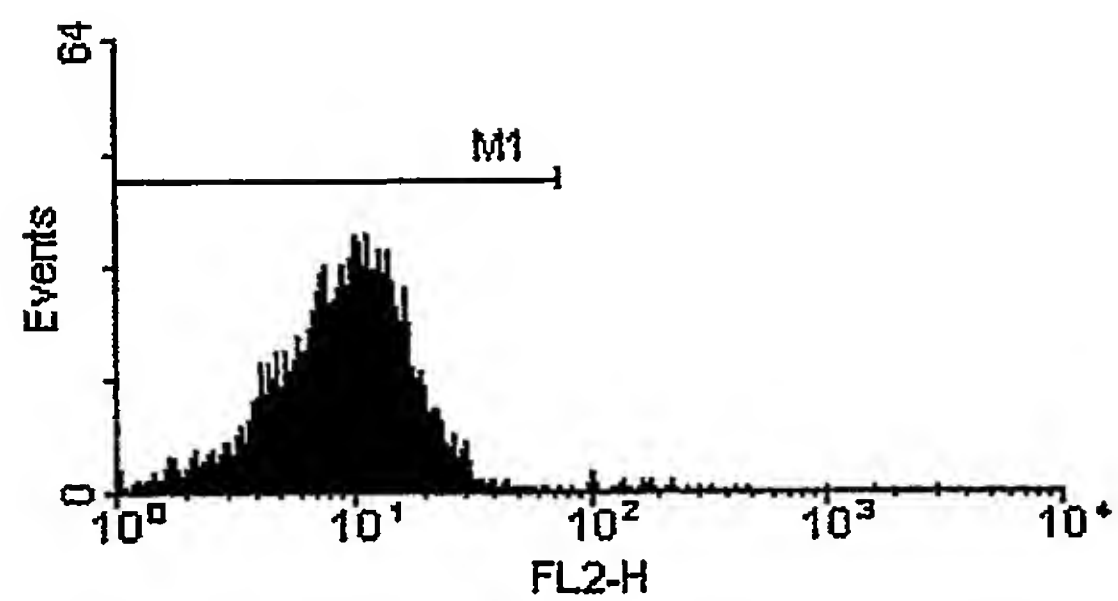
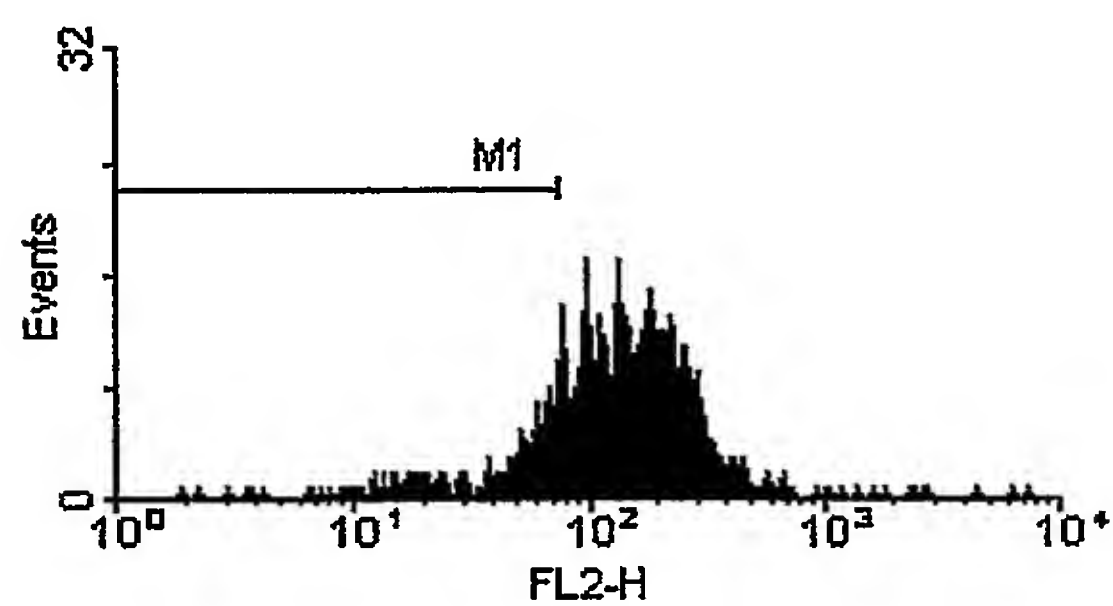
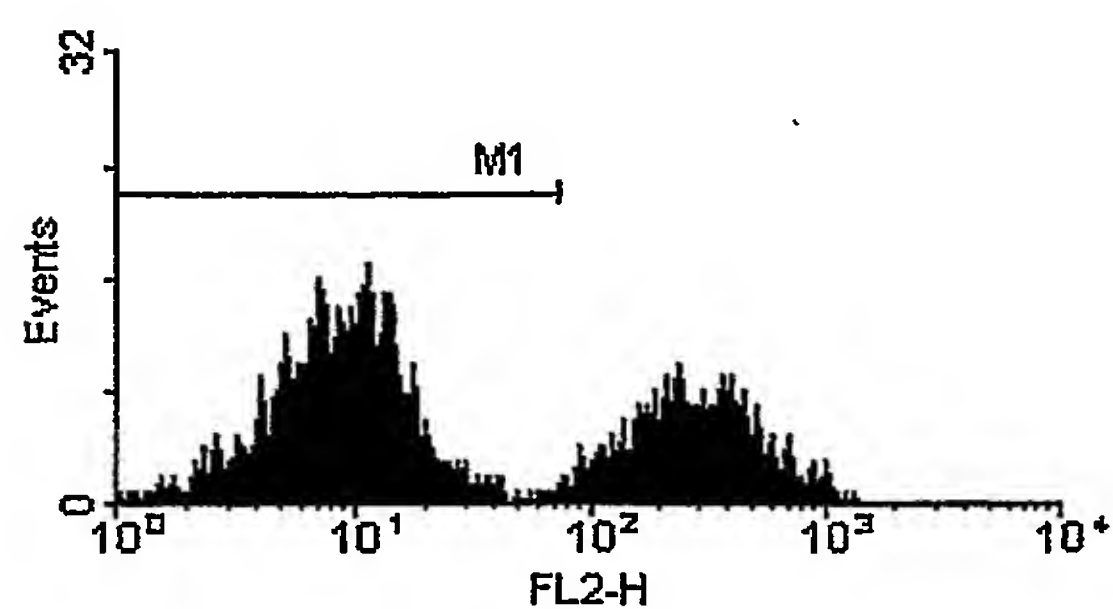


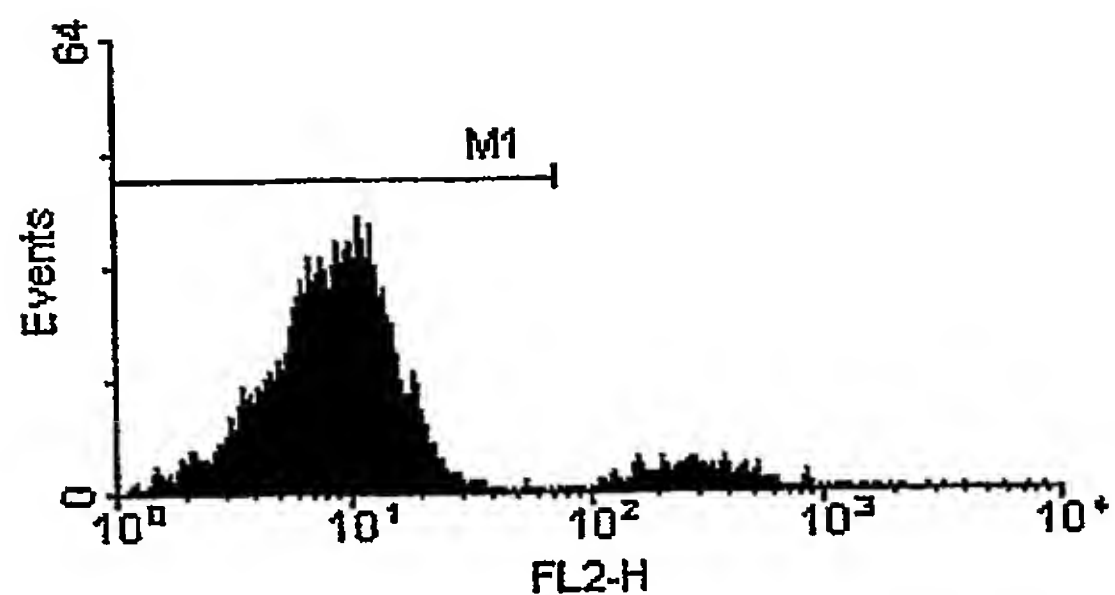
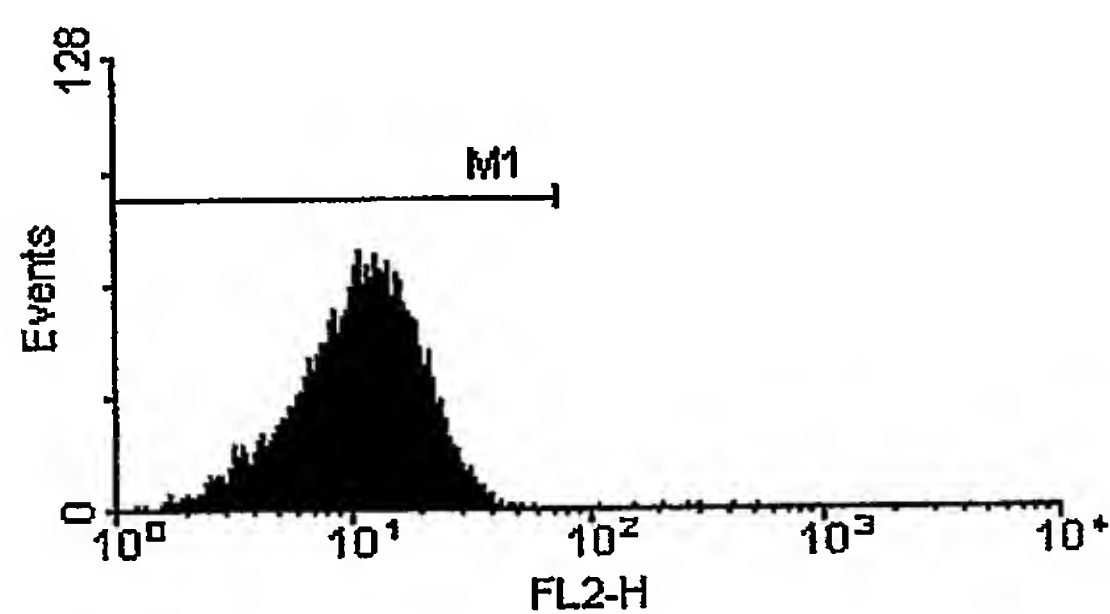
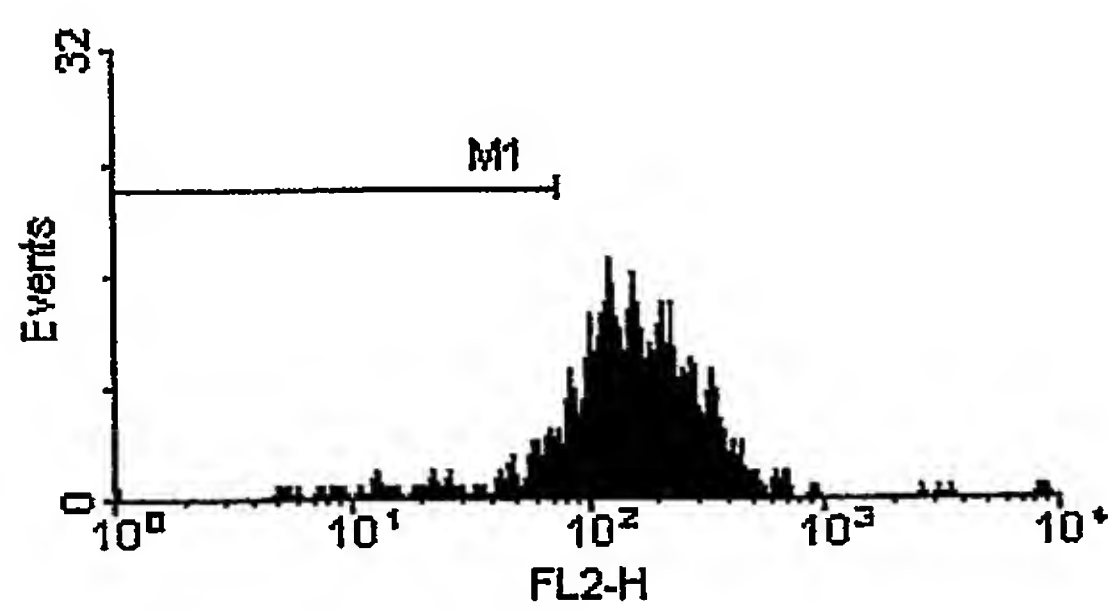
Figure 90



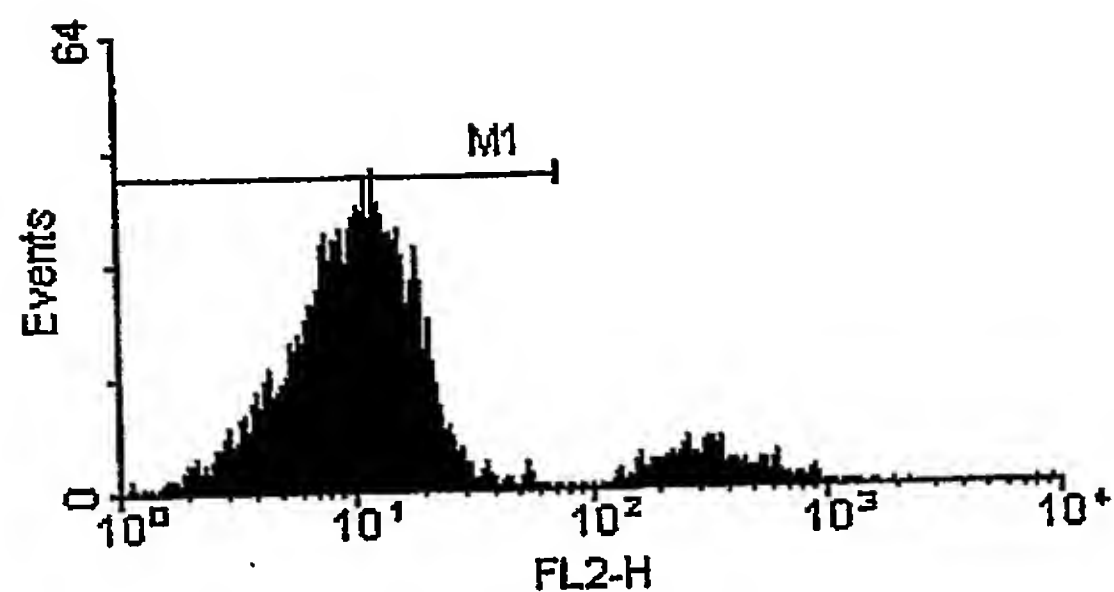
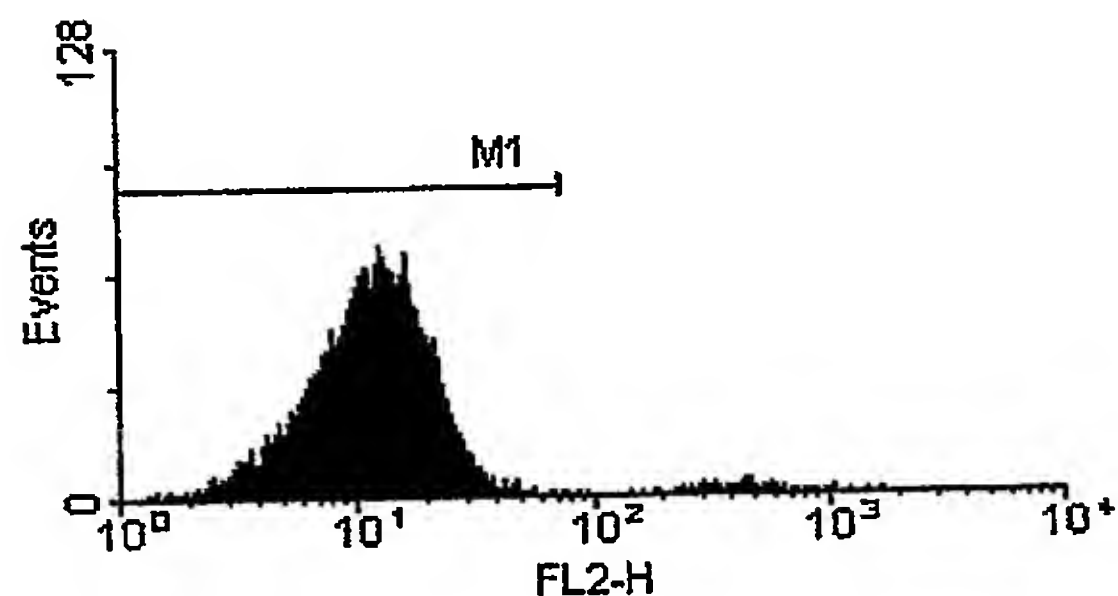
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**Figure 91a. PP LCL NYESO 0 TCR 5 μ g****Figure 91b. PP LCL NYESO 10^{-4} M TCR 5 μ g****Figure 91c. PP LCL NYESO 10^{-5} M TCR 5 μ g**

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**Figure 91d. PP LCL NYESO 10^{-6} M TCR $5\mu\text{g}$** **Figure 91e. PP LCL NYESO 0 TCR $10\mu\text{g}$** **Figure 91f. PP LCL NYESO 10^{-4} M TCR $10\mu\text{g}$**

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Figure 91g. PP LCL NYESO 10^{-5} M TCR $10\mu\text{g}$ Figure 91h. PP LCL NYESO 10^{-6} M TCR $10\mu\text{g}$

atgaacgctggtgtcactcagacccccaaaattccaggctcctgaagacaggacagagc
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 caaggagaagtccccaatggctacaatgtctccagatcaaccacagaggatttcccg
 ctcaggctgctgtcggctgctccctcccagacatctgtgtacttctgtgccagcagg
 ccgggactagcgggagggcgaccagagcagtagtctcgggcccgggcaccaggctcacg
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 gaagcagagatctcccacacccaaaaggccacactggtgtgcctggccacaggcttc
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 gtctgcacagacccgcagcccctcaaggagcagcccgcctcaatgactccagatac
 tctctgagcagccgcctgaggggtctcggccaccttctggcaggacccccgcaaccac
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Figure 92

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Figure 93

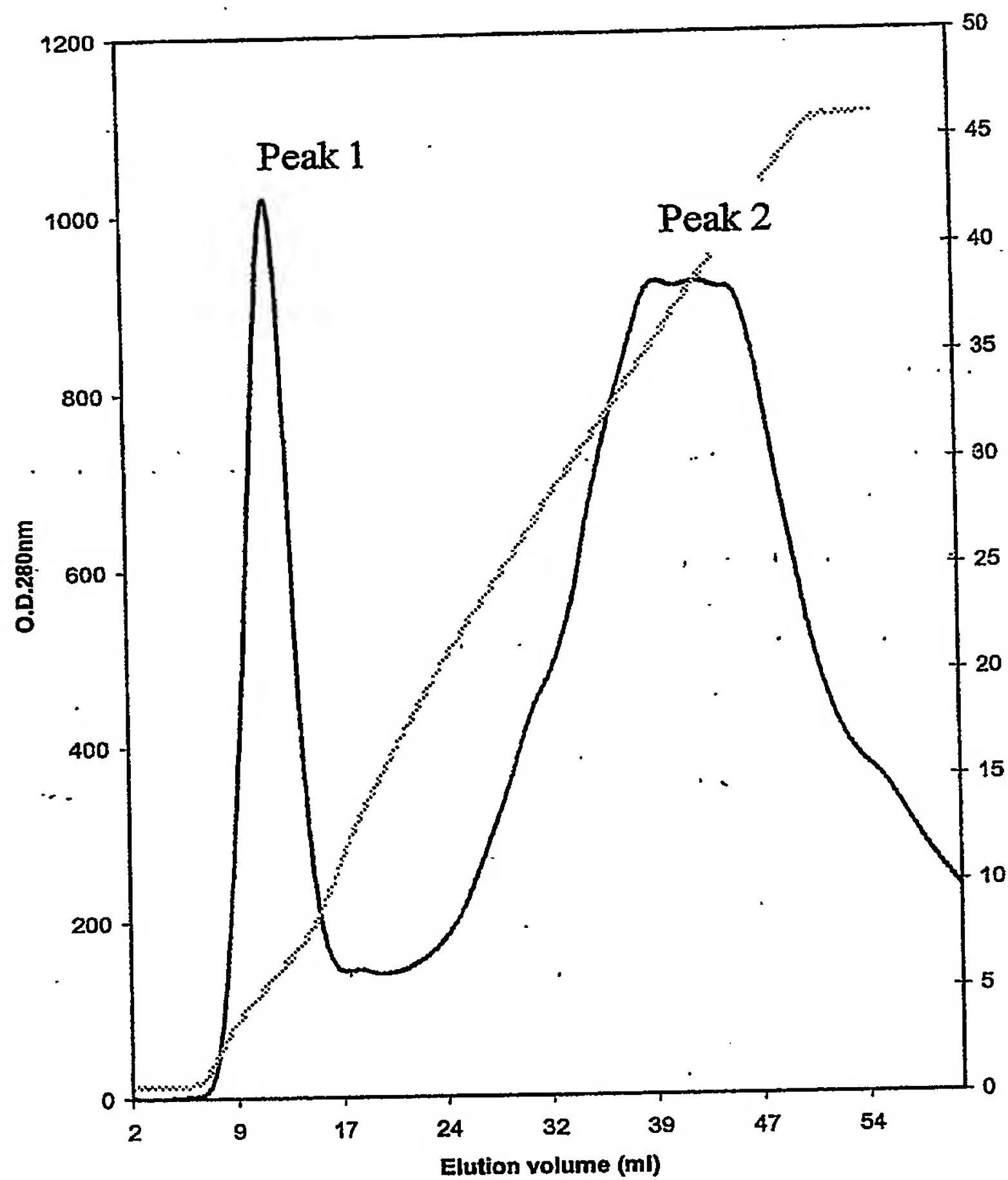
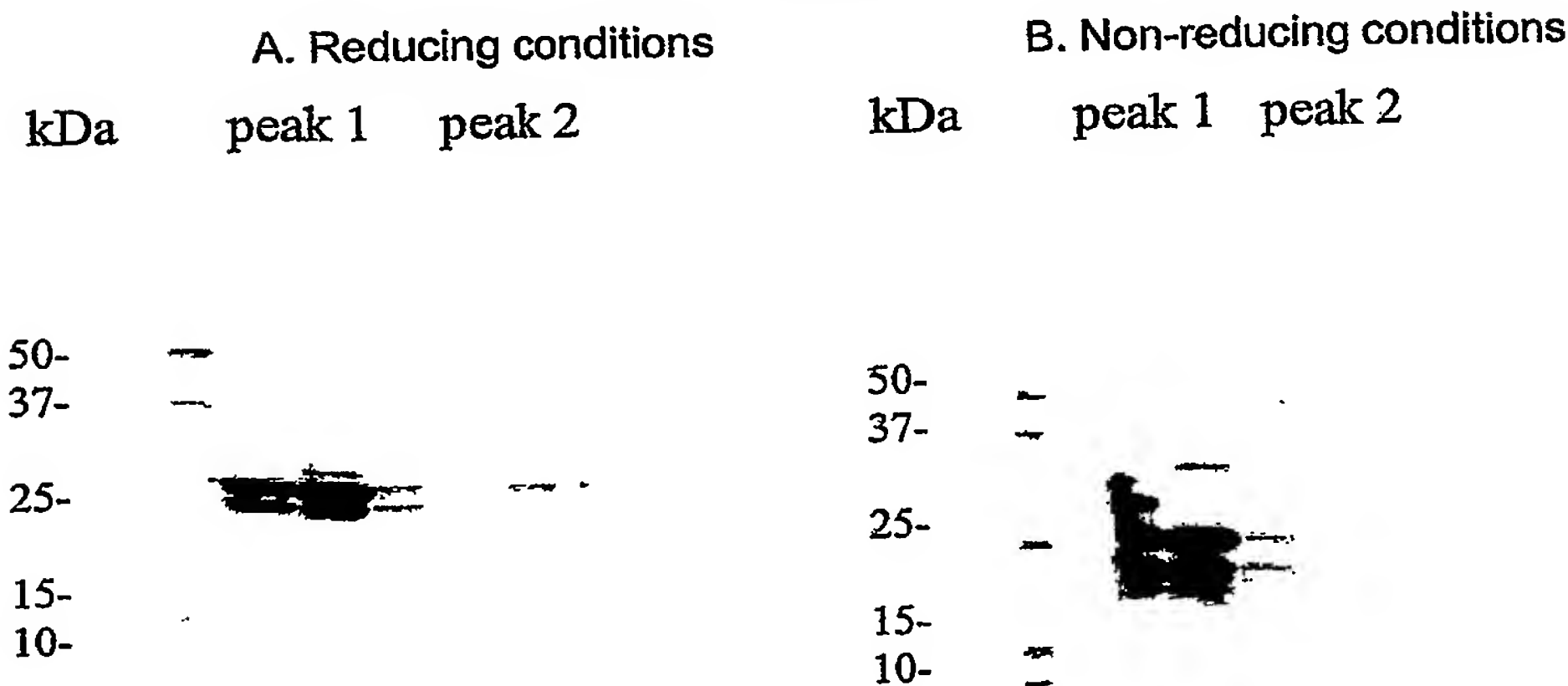
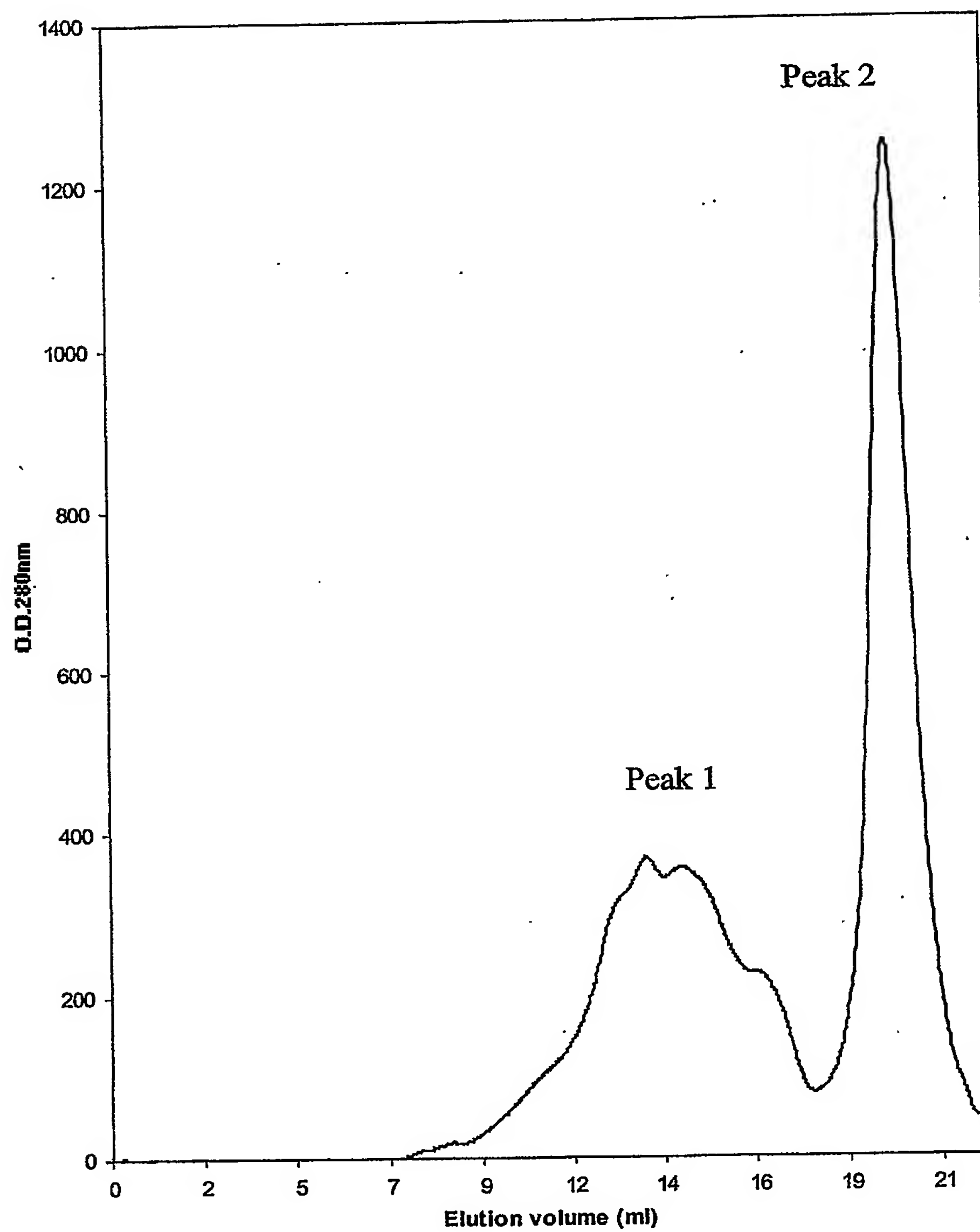


Figure 94



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Figure 95



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Figure 96

